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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, to maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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THE RIVERS AND HARBORS CONVENTION.

Twenty-eight States were represented at the First National Rivers and Harbors Convention which opened in Baltimore last week. The following officers were elected: President, George E. Barton, Philadelphia; secretary, William H. Love, Baltimore; assistants, E. R. Sherwood, Philadelphia; George H. Lord, New Orleans, and F. A. Scott, Cleveland.

The purpose of the Congress was explained by Theodore E. Burton, chairman of the River and Harbor Committee in the last Congress:

"I take it the movement which led to this convention was prompted by a desire to awaken general interest in river and harbor improvements. I am informed it is not desired that any specific project shall be advocated here, but at the same time you consider the improvement of the navigable channels and ports of the country as essential for our development, and that these ports and channels require the fostering care and assistance of the national government. The influence of this assembly should be exerted for liberal appropriations for rivers and harbors, but liberality should always be coupled with discrimination."

A feature of the afternoon session was an address by ex-United States Senator A. P. Gorman, in the course of which he said:

"The necessity for the improvement and development of our commerce was never greater than it is now. The only way to meet the keen competition of foreign countries is to offer equal facilities for the immense steamships that are now engaged in the ocean trade. We want harbors all along the coast that will accommodate the largest ships that cross the ocean. We must have in addition steamship lines that will reach from one end of the country to the other without the necessity of taking such a long, roundabout way. I mean that we need some large canals connecting the various navigable bodies of water."

ANNUAL REPORTS OF CORPORATIONS.

The United States Steel Corporation, the largest of all the so-called trusts, has set a worthy example in taking the public into its confidence and making a full and detailed statement of its operations during the past six months. As it happens, this company was able to make a fine exhibit. In spite of the long, expensive strike, the company shows that it has been making money right along, and its profits were enough to pay all expenses, provide for the sinking fund, pay the regular dividend on the common and preferred

stock and carry a comfortable sum to the surplus. But whether the statement be good or bad, it is the duty of these corporations to make a frank statement from time to time showing the exact status of their business. If this were done by all such corporations, there would be less prejudice against the trust and less demand for a certain government supervision of them. Moreover, the general public would be more disposed to take hold of the shares of prosperous corporations when they know that the corporations are dealing fairly and frankly with them. Many people are growing tired of investing in the shares of corporations, about which they know nothing, and so long as the directors of these concerns keep their affairs to themselves, the general public will become more and more suspicious, and more and more averse to buying their shares. In the light of recent experiment "blind pools" are not very popular.

INTERNATIONAL NAVIGATION CONGRESS.

Acting on the suggestion of General Gillespie, Chief of Engineers, U. S. A., our government has accepted an invitation to send delegates to the International Navigation Congress to be held at Dusseldorf, Germany, beginning June 29, 1902. General Gillespie is much interested in the matter, and he has secured the approval of the Secretary of War to his plan to send as delegates of the United States three of the most distinguished officers who have rendered especially noteworthy service on inland works. They will be selected particularly with regard to their ability to represent this country with honor and dignity. Each one of them will be required to prepare a paper upon some subject to be read before the congress. In order that they may have time for preparation, the three officers have already been notified of their selection and urged to accept.

FRENCH NAVAL PROGRESS.

A year has not passed, says the *Temps*, Paris, since the adoption by Parliament of the Naval Extension Bill, and yet one of the largest vessels to be built under the new programme will be launched on the 24th of next month. The armored cruiser Leon Gambetta has been built in the government yard at Brest, which, during the past few years, has made such extraordinary progress in the rapidity of construction. The new cruiser will be the largest afloat under the French flag, and will have a displacement of 12,550 tons, with a length of 450 feet, and a beam of 65 feet. She will be fitted with tubular boilers, and three triple-expansion engines of the vertical type, driving triple screws, and developing 27,500 horse-power, giving a speed of 22 knots. The officers and crew will number 730 men. The armament will comprise four heavy guns in pairs in turrets fore and aft, 40 smaller quick-firing guns, and five torpedo tubes, two of them under water. The Leon Gambetta will be ready for commission in 1903, and when completed will have cost 30 millions of francs.

MAGNETIC INVESTIGATION.

The coast and geodetic survey has established a magnetic observatory at Sitka, Alaska, and is constructing another at Honolulu, Hawaii, to co-operate with the British and German governments in investigating problems of the magnetic forces and needle variations throughout the world.

This is in connection with British and German expeditions for the South Pole on plans long ago formulated. It is expected to determine whether all magnetic disturbances and phenomena are subject to a common and world-wide cause, or are, in some instances, of a distinctive and marked local character.

REVIEW OF MARINE ENGINEERING.

The following is a summary of questions treated in a paper read by Mr. James McKechnie, of Barrow-in-Furness, at the summer meeting of the Institution of Mechanical Engineers, held at Barrow-in-Furness.

Steam pressures have been increased during the past ten years in the merchant marine from 158 lbs. to 197 lbs. per square inch, the maximum attained being 267 lbs. per square inch, and 300 lbs. in the naval service. The piston speed of mercantile machinery has gone up from 529 to 654 feet per minute, the maximum in merchant practice being about 900 feet, and in naval practice 960 feet for large engines, and 1,300 feet in torpedo boat destroyers. Boilers also yield a greater power for a given surface, and thus the average power per ton of machinery has gone up from an average of 6 to about 7 i. h. p. per ton of machinery. The net result in respect of speed is that while ten years ago the highest sustained ocean speed was 20.7 knots, it is now 23.38 knots; the highest speed for large warships was 22 knots, and is now 23 knots on a trial of double the duration of those of ten years ago; the maximum speed attained by any craft was 25 knots, as compared with 36.581 knots now; while the number of ships of over 20 knots was eight in 1891, and is 58 now. But probably the result of most importance, because affecting every type of ship from the tramp to the greyhound, is the reduction in the coal consumption. Ten years ago the rate for ocean voyages was 1.75 lbs. per h. p. per hour; to-day in the most modern ships, it is about 1.5 lbs. Ten years ago one ton of cargo was carried 100 miles for 10 lbs. of fuel, whereas now, with the great increase in the size of ships and other mechanical improvements, the same work is done for about 4 tons of coal—a result which means a very great saving when applied to the immense fleet of over-sea carriers throughout the world.

It may be said that so far as high-speed machinery is concerned, the universal practice is to fit a 4-crank engine operated from four cylinders, usually on the three-stage compound system, and occasionally for quadruple expansion, the cylinders being arranged on the Yarrow-Schlick-Tweedy system. Ten years ago the greatest power developed in any steamer was 20,000 i. h. p., and the highest speed on an over-sea voyage 20.7 knots. Now, 30,000 i. h. p. is the highest in naval practice, the speed being 23 knots, while in merchant practice over 36,000 i. h. p., has been developed, the mean speed on a trans-Atlantic passage being 23.51 knots, while at the present time there is building a steamer to excel this splendid result. Full credit for this remarkable speed should be given to the company who built the vessel, the Stettiner Maschinenbau Aktien-Gesellschaft "Vulcan," of Stettin, who have built for German owners the two fastest merchant vessels afloat, and are now building two to be at least equal in speed.

GULF WAVES THROW UP PARAFFINE.

A news item which recently appeared in the Galveston News tells of the taking up of paraffine from the Gulf of Mexico. According to the account this has been gathered up by some people, and a week or ten days ago a brick of it was sent to an oil prospector in Galveston. He pronounced it paraffine, and went to the coast country to investigate. He is back, and says that the reports are true that the paraffine is washed in from the Gulf, but from where he has no idea. At one place as much as 300 pounds was gathered up by coast dwellers who knew nothing of its value. This expert is of the opinion that paraffine oozes from an oil deposit below the water, and that it is practically refined by the action of the sea water. The coast dwellers claim that this stuff has been coming in from the gulf for several years.



DETROIT.

Special Correspondence to The Marine Record.

The wrecker Saginaw is at work on the barge Athens, grounded at the Limekiln Crossing.

It is now said that the name of the White Star line steamer which is being built for the run between Toledo and Detroit will be the New Greyhound.

John Thompson, hailing from Chicago, a deckhand on the steamer Sarah E. Sheldon, had his foot badly crushed and was brought ashore here on Tuesday and sent to the marine hospital for treatment.

Capt. James R. Raymond, manager of the Standard Automatic Releasing Hook Co., visited here a few days ago and fitted the davit tackle falls of the U. S. steamer Marigold with his equipment. The workings of the hooks were afterwards tested and found to work admirably.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending October 15: Prevailing wind directions for the week S. W.; highest velocity 56 miles south, October 12; mean temperature for the week 56°; highest temperature 75° on 11th; lowest 38° on 14th.

The old schooner Mont Blanc, coal laden, sprung a leak on Lake Erie last Saturday night and foundered about two miles from Bar Point. The water is not deep where she sank, and the crew saved themselves by climbing the rigging and were able to keep out of the water until rescued by the tug Sheboygan on Sunday morning.

The new steamer Buckman, which is on the ways at the Craig Ship Building Co.'s yard, will be launched Saturday or Monday. The vessel was built to the order of F. W. Wheeler, and is chartered to the Boston Fruit Co. for five years. She will engage in the fruit trade between Boston and Porto Rico and will carry passengers as well as cargo. It is expected that the sister ship to the Buckman will be ready to launch by the last of next week.

Secretary-Treasurer Henry C. Barter, of the International Longshoremen's Association, has announced that he will not resign his present position until after the next convention of the association. From nearly all the various locals and from the executive council requests have come to Barter asking him to remain and reconsider his intention to resign in order to devote his time to the American Workingmen's Protective Association, of which he has been chosen vice-president.

Inspectors at Detroit, with the exception of C. H. Westcott, the supervising inspector of the eighth district, have had nothing to say regarding the inspection of sailing vessels of which so much has been heard lately. The Detroit shipbuilder, who said that boats are being overlooked, finds many men in the government service who think as he does, but vesselmen generally say that only a few, if any, steamers are overlooked. Some of the recent disasters, it is said were due to overloading.

Inspector N. B. Conger, of the Weather Bureau, sent out on Saturday 825 circular letters to people receiving the local forecast cards, stating that he was revising the lists, and asking if they wished the service continued. Within 24 hours he had received 606 answers all wanting the cards. There were 68 more answers next day. The flood of letters plainly showing how much the people appreciate the service. The Weather Bureau reports are becoming of more value, carry greater weight and are more generally relied upon than ever before in the history of the service.

As a result of the Fulton's collision with the gates at the Poe lock at the "Soo," the following regulations have been put into effect to guard against more serious damage in the future: "All steamers must stop their engines when the bow reaches gates on entering lock, and start them therefrom only upon orders from the canal officials, and never above slow speed." It is possible that the next step will be for the revenue cutter patrol boat to supervise the passage of all craft or the canal authorities might place a policeman on each boat to see that the rules and regulations were not infringed.

Considerable delay has been experienced here this week by low water at the Limekiln Crossing. A change of wind now shows a fluctuation of several inches more than formerly, and if the Canadians can only open another outlet like the Chicago drainage canal is, lock gates will be found necessary at the mouth of the river, this, after Congress has been asked permission for the right to appropriate the people's money to pay for the canals, dams and construction as well as up-keep of the suggested improvement (?). Illinois was permitted to wrong the commerce of the Northwest and the wrong will now never be righted.

The Donnelly Contracting Co., in charge of building the government breakwater works at Ashtabula, are carrying the stone blasted from the Canadian bottom abreast of Amherstburg, Ontario, to cover their contract at Ashtabula. It is all right, I suppose, for the United States government to work on Canadian ground and use the territory disintegrated for the building of a marine fence off Ashtabula, and, it looks as if the contractors on both contracts slipped in easily on the different jobs combined, however this may be, the Donnelly people lost a steel scow loaded with this rock on Tuesday, and, while they may find the scow, the stone is removed from Canada.

BUFFALO.

Special Correspondence to The Marine Record.

Last week 110,000 tons of coal was shipped out of this port and nearly the same amount the week before.

A low stage of water has been experienced here during the past few days and when vessels ground they simply wait for a change of wind with a raise of water enough to float them.

Captains of vessels coming into Buffalo should take more care at the entrance of the harbor and hug the south breakwater closer to avoid the shoal at the entrance of Niagara river.

A survey held on the steamer Boston on account of her Lake St. Clair collision shows that only the upper works are damaged and after temporary repairs are made she will be ready for service and will resume her trips next week.

The steamer Avon, declared a total loss by fire, and disposed of by her last owners, the Union Transit Co., was given temporary repairs and left here on Wednesday for Ogdensburg, N. Y., under her own steam. The Hanan Transportation Co. are her new owners.

The ferry steamer Superior finished her season on the Crystal Beach route and left here to winter at an upper lake port, word has been received that after putting into Lorain for repairs to machinery she will now have to be dry-docked at Port Huron for calking, etc.

Repairs to the City of Genoa are being made as rapidly as possible. The upper works are burned nearly through and will have to be replaced. As many men as can be worked to advantage are employed on her and it is likely that she will be able to make a couple more trips before the close of the season.

The steel steamer which the Craig Ship Building Co. of Toledo closed a contract for last week, will be managed by Capt. Charles Beatty of this port. The new boat will be adapted for the lumber trade. She will be 204 feet keel, 40 feet beam and 16 feet deep. She will have triple expansion engines and two Scotch type boilers.

Freight rates on coal rule at 60 cents, Lake Michigan, including Escanaba, Waukegan, Manitowoc, etc. To Duluth 35 cents is paid. Chicago took 52,000 tons last week and about the same amount was divided between Milwaukee and Duluth-Superior. Chicago must receive a large supply by lake as the railroad cars are tied up, hence, the brisk shipments.

The local inspectors of steamboats have no authority over schooners and barges. Their jurisdiction extends only to steamboats, and it makes no difference what the condition of the sailing vessels may be, they have no power to interfere with them. For at least ten years Congress has been asked to pass a law bringing this class of boats under the steamboat inspection rules, but as yet nothing has been accomplished. Of course tow barges are not steamers any more than the inspectors are sailors but still some sort of a bluff might be made to say equipment inspection if nothing else and inspectors could visit each boat and study to learn whether she was overloaded or not, according to the ripeness of her hull, etc.

The Riter-Conley Mfg. Co., of Pittsburg, Pa., will erect a steel barge plant at Haysville Station on the Ohio river, below Pittsburg. Plans are being prepared.

CLEVELAND.

Special Correspondence to The Marine Record.

Bids are being received for the engines and boilers of the burned steamer Fedora as they lie in the burned hull of the craft ashore near Duluth.

Mr. Edwin S. Mills, manager of the Pittsburg Steamship Co. is still confined to his home though gradually recovering from the effects of an operation performed last week at the Lakeside hospital.

Capt. J. R. Raymond, of the Standard Automatic Releasing Hook Co., New York, spent the early part of the week at this port visiting vesselmen and others interested in his special equipment. The automatic releasing property of the hook is highly spoken of by those who have seen or used it.

There is ample business for a few specially constructed lumber steamers and Mr. Beatty, of Buffalo, with some of his Cleveland friends, apparently recognize the deficiency. The Craig Ship Building Co., Toledo, has been given an order this week for a craft of this sort and it seems safe to say that she will be a money earner for her future owners.

It will be a pleasant note for the local marine fraternity to know that Mr. John N. Coffin chartered this week as a permanent consort Miss Katherine Florence Little. I understand that the papers were signed in Chicago, but they will sail from Cleveland. It is not definitely stated, but it is quite probable that the fleet may be added to at a later date.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, for the week ending October 16: Prevailing wind directions during the week, south; highest velocity, 48 miles from southeast on October 13; mean temperature for the week, 56; highest temperature, 75, on the 11th; lowest, 40, on the 15th; sunrise and sunset data computed for local time at Cleveland, October 18th, sun rises, 6:17; sets, 5:14; October 21st, sun rises, 6:21; sets, 5:09; October 24th, sun rises, 6:24; sets, 5:05.

The new steel steamer W. S. Mack, named for one of the best lake shipmasters that ever floated, is to take her maiden cargo this week, from Buffalo to Chicago. The Mack was built at the Lorain yards of the American Ship Building Co., and is one of the modern cargo carriers of the lakes, assured to clear good and proper earnings for her owners, like the man she is named after always did during his active career. Capt. Mack was called hence Sept. 14th 1896, and his executors built the new craft which will be managed by his only son Mr. Will Mack.

One of the most conservative vessel owners gives me as his opinion this week that the season can in no way be recorded as a prosperous one for the men solely engaged in the owning and handling of vessel property. It is quite true, he said, that we have been busy enough, but at the low rate of freights, with the daily expenses and a robbing system of detention at loading and discharging ports, I can figure that a couple of my boats have been turned over to the insurance companies so far as their earnings are concerned. Unless freights brisk up from now to the close of navigation owners of floating property need not expect a very salubrious Christmas in so far as dividends are concerned.

There is still figuring being done on tonnage and a few more ships may be ordered before the close of the season. The deal for a passenger steamer for Lake Michigan parties is still on. Nothing has been done about the Ann Arbor railroad car ferry steamer, which dispatches last week said had been ordered. Very little is learned about the steamer for which John Craig, of Toledo, closed a contract for here last week. A. M. Carpenter, secretary and general manager of the Jenks Ship Building Co., of Port Huron, was in Cleveland a few days ago, and it is thought that something would be closed while he was here, but if so, the particulars have not yet been given out. Mr. Carpenter has room to put down a good sized keel at the yards.

The annual meeting of the yacht racing union of the Great Lakes was held at Cleveland Yacht Club house on Saturday last. The most important business transacted was the order to the construction committee to frame a new set of rules governing the classes of yachts. It is the opinion of the delegates that the yachts should have greater living space aboard, and not be mere racing machines. The committee will report at a special meeting to be held at Buffalo, probably next month. The Union also took up the cases of Arthur Pettie and James Gore, Detroit yachtsmen, who were said to be professionals, sustaining the protests made against both. Pettie was one of the crew on the Cadillac in her races against the Canada. An action was taken, however, whereby Pettie may be reinstated within a year. Officers

were elected for the ensuing year as follows: J. Frank Monck, Hamilton, chairman; John R. Rathbun, Detroit, re-elected secretary and treasurer. The next annual meeting will be held at Hamilton.

DULUTH-SUPERIOR.

Special Correspondence to the Marine Record.

Some two years ago President James J. Hill of the Great Northern Railroad stated that his company was planning to build all of its own cars in its own shops. It is now stated that preparations for building both wooden and steel cars are under way, and that the work of building will begin at an early date.

The Duluth & Iron Range Railroad Co. has plans under consideration for the improvement of ore dock No. 4 at Two Harbors. It is proposed to increase the height of the dock about 9 feet and raise the ore spouts 7 feet. It will be necessary to grade up the tracks leading to the dock, and the entire work will call for an expenditure of about \$160,000.

The sale and shipment of lumber is very brisk and there is every indication that the hustle to get stuff east will continue for a month yet. There is timber enough at the head of the lakes to last for years to come, at the same time it is quite certain that the finest quality of Puget Sound lumber will find its way here each coming season in continued larger quantities.

James H. Walker, a cook on the steamer Bon Ami, was found guilty at Duluth of having smuggled whiskey into the United States from Port Arthur, Ont., and sentenced to four months imprisonment in the county jail. Richard Williams, clerk on the same steamer, who was involved in the same trouble, but who pleaded guilty, received a sentence of sixty days' imprisonment.

There will be an advance in the lake flour rate from Duluth to the seaboard October 21. The present rate is 14½ cents to New York, and it is to be advanced to 16 cents. Under the advance the rate will be 19 cents from Duluth to Boston, and 15 cents to Philadelphia. The usual differential of 5 cents per 100 pounds between Duluth and Minneapolis will prevail under the advance.

C. E. Bailey, a well-known mining engineer of the Mesaba range, says that the people on the ranges are sorry to see the Board of Equalization double the assessed valuation of the iron ore stock piles, as they fear it will result in small stock piles, which would mean fewer men employed and less money distributed in wages during the stock-pile season, which is the closed season of navigation. They believe, also, that the action will result in the stock-piling of little low grade ore unless the mine has a contract for its delivery.

The Duluth & Iron Range has shipped 3,854,438 tons, as compared with 3,181,177 in 1900. The Duluth, Mississippi & Northern 2,638,314 tons, as compared with 3,207,436 tons in 1900, and the Eastern Minnesota road 1,700,000 tons (estimated), as compared with 1,340,000 tons to October 1 last year. The total increase for the three shipping points is 464,139 tons. It is understood that ore will be forwarded as freely as possible to the end of the season, and the total shipments from Minnesota will certainly be in excess of 10,000,000 tons for the season.

The Duluth & Iron Range Railroad Company has under consideration plans for the improvement of ore dock No. 4 at Two Harbors. It is proposed to increase the height of the dock about nine feet and raise the ore spouts seven feet. The changes will increase the capacity of the dock somewhat, and by raising the spouts make it more convenient in the matter of loading the larger class of boats. There is no room to extend the dock. The dock is 1,000 feet long, 52 feet high, and has 168 pockets. The cost of improvements is estimated at about \$170,000.

Two cars of wheat were on track at Duluth on Saturday morning, October 5, that broke the record for big loads, one over the Northern Pacific with 1,709 bushels and the other over the Great Northern with 1,753 bushels. With a train load of these big cars, the question of big train loads is an interesting one, says the Commercial Record. With their grades into Duluth, there is nothing to prevent either road carrying a train of fifty of these cars. At the present time the Great Northern is carrying mixed trains of 40 to 60 cars, all loaded. Fifty of these big cars, with an average of 1,700 bushels each, would make a train load of 2,550 tons. To the railroad man the earnings of this train load would be interesting. The wheat rate from Grand Forks to Duluth, 300 miles, is 14½ per hundred, making the earnings of a train load as above \$7,267.50.

Judge Lochren of the Circuit Court has now before him the last case on the calendar, that of the Iron Blt Mining Co. vs. the Duluth Furnace Co. It is the case in which the plaintiff sues to recover \$13,600 on an ore contract. It alleges that the defendant company agreed to take 20,000 tons "Buckeye" iron ore at \$2.84 a ton, to be delivered during the season of 1900. The defendant, however, failed to carry out the contract, and the plaintiff claims that it was obliged to sell the 20,000 tons at \$2.16 a ton. Suit is brought to recover the difference between \$2.16 and \$2.84 a ton on the full amount. The Furnace Co. admits that a verbal contract was made, but contends that it was conditional and could be abrogated by it. H. D. Goulder, Esq., of Cleveland, and H. R. Spencer, Esq., of Duluth, are the attorneys for the plaintiff, and John A. Williams, Esq., represents the defendant.

The Minnesota State Board of Equalization has raised the assessed valuation of iron ore on Minnesota stock piles to \$1. The mining companies consider that the assessment is unjust, but will look to the local equalizing boards to correct it. C. A. Congdon, of Duluth, attorney for some of the mining companies says: "We showed the State Board contract for 500,000 tons of ore sold at the mines for 90 cents a ton. That, too, was guaranteed ore, and not mine run. For mine run the price is only 62 cents a ton. I assert that no property in the state is assessed as high as the ore on the stock piles at the mines. It is the practice to assess personal property at not to exceed 50 per cent. of its value. The commissioners of this county assessed it just about what it costs to buy the ore on the ground, mine it and place it in stock. The State Board assesses it for 10 cents a ton more than it brings in the stock piles." It is likely to work an injury to a large body of men should the state persist in taxing the raw product. Stock piles furnish winter work and mine owners will not pile to be taxed, consequently, will leave the ore where it is and shut off winter work. C. A. Congdon, Esq., is intellectually able to present this phase of the matter to the Board of Equalization, and it is to be hoped that he will succeed in convincing them that the proposed tax is an injustice to our citizens.

CHICAGO.

Special Correspondence to The Marine Record.

The City of Milwaukee, of the Graham & Morton line, has gone into winter quarters.

The death of James W. Brooks, chief engineer of the Western liner Commodore, is announced from Buffalo.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Chicago, for the week ending Oct. 16: Prevailing wind directions during the week, S. W., highest velocity, 50 S. October 11th. Mean temperature for the week, 54; highest temperature, 74 on the 11th; lowest, 38 on the 16th.

The Northtown owned by the Northwestern Steamship Co. is now due here with coal, after discharging which she will load a few hundred tons of general cargo for Boston, Mass., and then attempt to enter the coasting trade, her three sister ships following her later, but not so late to meet with ice in the St. Lawrence river or gulf. So enliveth the Chicago-Trans-Atlantic crank episode. The eastern coast will probably have four handy, well built, capable steamers to knock out a fleet of schooners' at a later date they can perhaps be sent to the Philippines.

The RECORD last week announced the loss of the whaleback steamer Thos. Wilson, ashore on the reef at Bailey's harbor in a heavy storm, thick fog prevailing, and the craft flying light, pounding her plates to pieces. It is characteristic of the lakes to find a vessel on a fellow's farm one month or piled up on a rock-bound coast, and, a little while later to find the same hull droguing around as previously. In the present case the Wilson was released and landed in South Chicago, where she will be given permanent repairs and placed in the like same like good order and condition as she was previous to the duly supposed total loss.

It is more than likely that the so-called Lake Carriers' shipping offices, costing several thousands of dollars each year, will be closed by next season and all classes of help to run boats be engaged from union offices. It is possible that the expenses paid to keep up these shipping offices would be better given to the actual workers than to idlers ashore. The labor history is repeating itself, and the sailors' union, with firemen, engineers, pilots and masters added to the ranks, supported by the Federation of Labor, will again take control of the workings of all vessels. A demand for increased wages and recognition of union labor is to be made

at once upon the owners who are in the Lake Carriers' Association.

We have enough, and too much of it here, and now Milwaukee is getting touched at much the same gait, this is the old squabble between tug men and bridge tenders, more or less felt in every lake port. The Milwaukee Tugmen's Association has passed resolutions which will be presented to the Board of Public Works. These say that the bridge-tenders are too slow in opening for boats. The bridgemen declare the tugmen take a delight in running up and down the river just to make the bridges turn for them, and so the merry kilkenny war proceeds. Of course, the tugmen are right, but it's hard to make political bosses controlling bridges see the point; no tugs use fuel for the fun of seeing bridge-tenders stir their stumps.

It does seem as if the members of the common council knew not or cared not about the shipping frequenting this port and would as soon see the river closed up as not. The most recent attempt to interfere with and harass lake commerce was perpetrated this week by an ordinance introduced in the council Monday night doubling the time the bridges are to be closed for traffic morning and evening. By the ordinance the bridges would be closed from 5 to 9 o'clock in the morning, instead of from 6 to 8, and at night they would be closed from 4 until 8 o'clock, instead of from 5 to 7. The Board of Trade, River Improvement Association and other bodies interested in lake commerce will take action against the new scheme. A delegation of marine men called upon the mayor, and were assured that he would veto any ordinance of that kind if it passed the council. This is all right as far as the mayor is concerned, but it shows the disposition of the common council to be inimical to the interests of waterborne commerce.

Plans recently ratified at a meeting of the directors of the Dunkley steamer line to South Haven from Chicago will give that resort the most ample steamer accommodations next season of the ports on the east shore. The plans include the addition of a steamer of much the same sort as the Petoskey for a nightly service from each shore, with the addition of a large fast steamer for the regular day service. The latter, which is to be a twin screw of a guaranteed speed of 19 miles per hour, was contracted for at New York on Saturday last, the company being unable to secure a berth on the lakes for her construction in time for next season's service. This steamer is to be put in service June 1, while the Petoskey and her mate will go into service March 1, a much earlier date than is usually selected for the east shore by the passenger lines. A new side-wheel steamer larger than either the City of Milwaukee or City of Chicago is to be built for the Graham & Morton Co. for service between Chicago and St. Joseph, but her construction will not be entered upon until late next season. Officials of the Williams line are not ready to announce anything definite about the much-mooted steamer, which they claim will be built this winter and finished in time for use on the South Haven route next summer. It is understood that the delay in letting the contract has been because of the forthcoming decision in the Darius Cole litigation, which, it is expected, will be handed down during the next ten days.

BRITISH SHIPPING.

Fairplay, London, says: "British shipping has never been in a more depressed condition than at present. No doubt, freights in some directions have been lower, but current working expenses (bunkers, insurance, etc.) are so exceptionally high that the margin of difference is more than swept away, leaving net results which are so unfavorable as to be appalling. This condition of affairs is all the more remarkable in view of the absorption of tonnage in connection with the South African war. It is further to be borne in mind that September is a month in which all navigations are open and harvests are coming in. Despite these factors, which in ordinary years tend to strengthen the freight market and send rates up, the shipping business has never been so unprofitable. Bad as the position is, it would be less intolerable if there was some prospect of things mending; but, unfortunately, the outlook is extremely discouraging. The tonnage recently launched and now in course of construction is unusually heavy. The launches of merchant steamers during the first eight months of the year are estimated to exceed three-quarters of a million tons and the existing depression is largely due to this enormous addition to our fleets. When the unprecedented quantity of tonnage now on the stocks is put into the water, the effect on the freight market can hardly fail to be disastrous."

NEXT DOOR NEIGHBORS.

The Schley Court of Enquiry, now on its murky progress through Washington, would have made Pilate ask again, "What is truth?" Whatever is to be accomplished by the washing of naval linen—and the laundresses seem to make it only dirtier as their dreary scrub goes on—one end is certain; the reputation for veracity of the present body of registered naval officers has received a dark smirch. They are often the next door neighbors of merchant-men in lighthouse, hydrographic, convoy, consular, and other duties. It is not unimportant to know, therefore, how they secretly regard truth-telling. Pleasant it is, therefore, to point to the mute testimony of an old court-martial record incident to a pending case in the Court of Claims, which shows that naval officers will tell the truth when doing so means self-sacrifice, and without hope of present reward. That record is a story of trial in 1886 on the hot west coast of Central America and in the fogs of Peru.

One torrid day in Guatemala, in January, 1886, the executive officer of the U. S. S. *Adams*, Lieut. Comdr. N., went ashore "on leave" and returned apparently too drunk to perform duty. This was partly if not wholly due to sun-stroke, a statement that may provoke the usual incredulous smile. Belief in it, however, gained him the sympathy of Ensign E., who saw him, as a consequence, "put under suspension," made a ship prisoner thereafter until May, anxiously awaiting a trial that might result in his dismissal. N. asked E. to be his counsel, told E. about the "family and aged father dependent on him for support", and who was also worrying." As the *Adams* reached Panama on her southward voyage the two determined to end the suspense. If a trial must be waited for until they met the flagship, which was then in Chili, months more might pass with N. a prisoner in the hold of a ship in the hot tropics. The court-martial could be ordered, however, by the Secretary of the Navy (Art. 38 sec. 1624 R. S.) such had been convened by him in Panama not long before, under similar circumstances, and in the same Pacific fleet of which the *Adams* was a member. (*Mullan v. U. S.*) Capt. K. however, was so ignorant of law (this, G. C. M. O. 37 of 1886 statute,) as to say that the "holding of a court in any other manner" than by the chief of the Pacific fleet "was impossible," and did not encourage a suggestion made to him by Ensign E. that K. ask the interposition of Rear-Adm. J., chief of the Atlantic fleet, then at Aspinwall just across the isthmus from Panama. J. wanted some vessel to remain at Panama and would have gone to the expense of sending a cablegram to Washington to effect that. For this is what he did:

At 6 o'clock one morning, Feb. 6, 1886, E. was sent ashore to buy coal for the *Adams*. At Panama he learned that Rear-Adm. J. was to arrive that forenoon from Aspinwall on a visit to Capt. K.

Officers of the Navy are not required to be dumb in each other's presence, and at the Grand Hotel, Panama, where J. subsequently came, E. addressed J. in behalf of N., requesting J. to take such measures as might lay within his province to give N. a speedy trial. The request was put in writing, so that it might be referred to Captain K., who just then was five miles away at the man-of-war anchorage in Panama Bay, but who was coming ashore to meet the Admiral.

The captain and the ensign did not meet until the next morning, after both, at different times, (K. in the night) had returned to the *Adams*. What happened was thus testified to by K. in the subsequent court-martial: "Between half past seven and eight o'clock, on the morning of the 7th, I went out of the cabin and saw Mr. G., who was on deck. I told him to send for Mr. E. and to be present. . . Mr. G. was doing duty as executive officer. . . I wished him to hear. . . Mr. E. came up on the starboard side of the quarter-deck from below, 'and there K charged him with 'disrespect' in appealing to J. and 'told him that he should consider himself under suspension for disrespect to his superior officer. I then directed Mr. G. to see the fact properly entered in the ship's log.' (This is ruled by the Navy Department to be the evidence of the infliction of a punishment, the log book entries being precisely similar to those in G. C. M. O. 18 of 1897. (See MARINE RECORD of Sept. 19, 1901, p. 8.) Naval general court-martial orders state again and again that the publication of a charge and a sentence constitutes a "public reprimand," as it is unquestionably the announcement of an express or implied rebuke. Article 24, sec. 1624, R. S., makes unlawful the infliction of a public reprimand by a captain on a commissioned officer, and Article 8, cl. 17, sec. 1624, R. S. makes it the duty of every officer to report infractions of naval law. Ensign E.,

therefore, in the conscientious performance of his duty, reported K to Rear-Admiral M., commanding the Pacific station, for "inflicting an illegal punishment."

On May 24, 1886, E. was brought before a court-martial charged vaguely with "conduct to the prejudice of good order and discipline," a charge so hazy, broad and indefinite that Congress has not deemed it politic to make it justiciable by naval laws, who might punish the innocent under it. The only "conduct" made punishable by the statute governing the navy is more narrowly described as "scandalous conduct tending to the destruction of good morals" (Art. 8, sec. 1624 R. S.). Under the charge of conduct prejudicial to discipline was specified "making a report" that was "unfounded." No falsehood was charged. And here first is seen the gravity with which naval officers view an accusation of falsehood. It is not to be lightly made. Even where, as in this case, the anger of a captain who (wrongfully) felt himself outwitted by a subordinate (for the *Adams* was detained in Panama) incited the charges, naval instincts compelled even prejudice to distinguish between a willful misstatement of facts and an erroneous conclusion of law based on those facts. With the latter, with careless judgment, E. was only intended to be charged.

It was also alleged that communicating with J. was "conduct to the prejudice," etc. In support of this a regulation was specified. On scrutinizing this regulation and comparing it with others, it will be discovered to require letters from a naval subordinate to any superior to pass through his ship's captain's hands only when they are written to a common superior. (Navy Reg. of 1876, p. 128, par. 8; p. 129, par. 15.) It was plain, too, that the circumstances of the emergency under which it was sent prevented other than the subsequent observation by K., and that he saw it so immediately after its reception by J. that it was not of the slightest use to notify him before. Nothing was or could have been effected one way or another by it. It was K.'s duty to forward official letters whether he liked to or not. The regulations specified, moreover, stated that the only consequence of not sending a letter through intervening channels where required was that such letter would not be considered "official" and would lose some force accordingly. The facts as to this letter, therefore, E. promptly admitted, coupling this with, "No letter was written by him to Admiral J. which was improper in itself or under the circumstances."

From the foregoing it will be seen that it was incumbent upon E. to prove not only that what was in the eye of the law a "public reprimand" was administered, but that it was accompanied by circumstances of scolding that would impress the not too independent naval jury. Capt. K. having denied doing anything unlawful, he was asked on cross-examination, "Please define a reprimand." Immediately following this the record reads: "A member of the court objected to the question as irrelevant." [Without the slightest chance for argument.] "The court decides that the question shall not be put. The accused made the following statement, 'Capt. K. has testified that he did not inflict a reprimand, and we desire to know what he meant by the word.' The court did not wish to reconsider its decision."

Washington, D. C. GEORGE F. ORMSBY.
(TO BE CONCLUDED NEXT ISSUE.)

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, furnish the RECORD with the following eastern freight report:

Continued dullness still characterizes our freight market, as is shown by the fixtures of one steamer hence to Hong Kong with case oil at 22 cents per case, and another from Norfolk to Manila with coal at \$5.75 per ton, a reduction of 1½ cents per case and 25 cents per ton respectively from previous charters in that direction.

The demand for grain tonnage is practically nil, and there is no indication of any revival within the near future. Some little activity has been manifested in chartering from the Atlantic cotton ports as the annexed figures will show, but the rates accepted mark a further decline. The supply of tonnage from the Gulf continues in excess of the demand, and several vessels are lying idle unable to find employment.

Business in sail tonnage continues to exhibit a declining tendency in the absence of sufficient inquiry to sustain the market. The decline in case oil rates to the far East of 2½ cents per case for vessels for distant loading also fully represents the shippers' ideas for prompt or nearby tonnage, which is attributed to the general depression in steam freights. In other branches we have nothing of interest to mention.

SUEZ CANAL TRAFFIC.

The British Suez canal directors have reported the navigation through the Suez canal for 1900, as compared with that of the two previous years. The following is a summary of the report:

The net tonnage for the past year shows a decrease of 157,477 tons, as compared with that of 1899, but an increase of 499,549 tons as compared with that of 1898.

The transit receipts, which in 1899 amounted to 91,318,772 francs (\$17,624,230) and were higher than any previous year since the opening of the canal, fell to 90,623,608 francs (\$17,490,356) in 1900, being a decrease of 695,164 francs.

The number of vessels which passed through the canal was 3,503 in 1898, 3,607 in 1899, and 3,441 in 1900, of which 2,295 in 1898, 2,310 in 1899, and 1,935 in 1900 carried the British flag.

There has consequently been a falling off in the tonnage of British vessels, which amounted to 6,297,743 tons in 1898, 6,586,310 tons in 1899, and 5,605,421 tons in 1900. During the same period the tonnage from German vessels has increased from 969,597 tons in 1898 to 1,070,767 tons in 1899 and 1,466,391 tons in 1900.

Of 2,407 merchant vessels and vessels in ballast, of a net tonnage of 6,612,316 tons, passing through the canal, 1,661 ships, of a net tonnage of 4,705,634 tons, were British, being fully 69 per cent. of the number and fully 71 per cent. of the tonnage; 291 or 12 per cent. were German vessels, whose tonnage was 11.1 per cent. of the whole; France, Holland, and Austria-Hungary combined furnishing a total of 11.8 per cent. of the vessels and 9.6 per cent. of the tonnage of the carrying trade to the East through the Suez canal.

In the ten years 1889-1899, the annual net tonnage ranged from 6,783,187 tons to 9,238,603 tons, and the transit receipts from 66,167,579 francs to 85,294,769 francs (\$12,770,343 to \$16,461,890). The average of the net tonnage was 7,992,897 tons, and the transit receipts 75,126,933 francs (\$14,489,498), while in 1900 the net tonnage was 9,738,152 tons and the transit receipts amounted to 90,623,608 francs (\$17,490,356). The mean net tonnage per vessel also rose from 1,951 tons in 1889 to 2,743 tons in 1899, as against 2,830 tons in 1900.

The mean duration of passage for all vessels navigating the canal amounted to eighteen hours and thirty-two minutes in 1900, as compared with eighteen hours and thirty-eight minutes in 1899. In 1900, the percentage of vessels navigating by night was 91.2 per cent. as against 90.7 per cent. in 1899.

The percentage of vessels drawing less than 23 feet was 58.9 in 1899, as against 62.4 in 1900; while that of vessels drawing more than 23 feet was 41.1 in 1899, as compared with 37.6 in 1900.

The maximum draft allowed for vessels passing through the canal is 25 feet 7 inches, 302 vessels, drawing more than 24 feet 7 inches used the canal, as compared with 386 in 1899 and 374 in 1898, representing a percentage of 10.7 in 1898, 10.7 in 1899, and 8.8 in 1900. It is hoped that before long the maximum draft allowed will be raised to 26 feet, 3 inches.

It may be of interest to remark that in 1890 only 13 vessels passed through the canal with a beam of 49 feet 2 inches or more. Since 1895, the number has increased as follows: Forty-two in 1895, 68 in 1896, 92 in 1897, 123, in 1898, 159 in 1899, and 212 in 1900.

The number of troops carried through the canal in 1900 amounted to 154,249, as against 108,552 in 1899, being an increase of 29,711 Russian, 28,770 French, 22,634 German, 634 Italian, 587 Japanese, 319 Dutch, and 297 Portuguese, against a decrease of 13,238 British, 8,543 Turkish, 7,891 Spanish, and 7,583 American troops, as compared with 1899. The number of civilian passengers amounted to 102,415 in 1900, as against 88,616 in the preceding year; while the number of pilgrims, emigrants, and convicts was 25,530 in 1900, as compared with 25,179 in 1899.

In the year 1870, 26,758 civil and military passengers were carried through the canal; in 1880 the number rose to 98,900, in 1890, to 282,203, as against 221,348 in 1899.

ACCORDING to the Liverpool Underwriters' Association returns the casualties to vessels of 500 tons gross register and upwards reported last month were: From weather damage, 41; foundering and abandonments, 2; strandings (including 10 total losses), 121; collisions, 114; fires and explosions (including 3 total losses), 19; and other casualties, 74—making for September, 371 casualties (of which 15 were total losses), against 345 in September last year including 35 total losses).

THE MARINE RECORD.

AMERICAN COAL HOISTER AT ALEXANDRIA.

John G. Long, U. S. Consul-General, Cairo, Egypt, writes the Department of State as follows:

I have to report another trade invasion of Egypt by Americans, no less important than the securing of the Atbara bridge contract, which attracted so much attention on both sides of the Atlantic a few years ago.

The greatest work ever undertaken in Egypt in regard to discharging coal from steamers has just been completed in Alexandria. The huge mass of machinery that towers above the surrounding ships owes its origin to Mr. Alexander E. Brown, an American engineer, who has invented a system of suspended bridge tramways, whereby colliers could be unloaded automatically in about one-quarter of the time taken by manual labor and the use of steam winches. The Egyptian railway administration decided to adopt this system; the present apparatus is the first that has been installed in Africa.

The hoisters here are alleged to be capable of unloading 2,120 tons of coal in a working day of ten hours. A boat that now takes a week to discharge will, it is stated, by the help of these coal hoisters, be discharged within 48 hours of berthing. These machines will be able to work on two or three ships at a time, and the saving of labor is apparent. There will result an enormous decrease in "small," as there will be no coal dust flying about. Every bit of coal will be put into buckets and carefully unloaded again, none being wasted.

These suspended bridge tramways, or as they are popularly called, coal hoisters, are each 353 feet 9½ inches in length. They have the appearance of an aerial bridge with a cantilever-arm extension at either end. The method of working is as follows: On a suspended track on the bridge, 14-inch gauge, runs a trolley carrying buckets, each having a capacity of 1 ton. On arriving over the hold of the ship, the bucket is automatically lowered. The buckets can be unhooked, so that three or four can be filled at the same time. When the bucket is filled, it is raised again to the trolley and run back again and discharged at any point on the quay or into railway trucks. A bucket can be raised from the hold of a ship, put on the trolley, carried to the farther end of the bridge, discharged, and returned to the hold again in the space of one minute. The bridge is 27 feet clear at the lowest part, and the highest part is 72 feet. Each bridge is supported on a pier at the sea end and shear legs on the other side.

The pier allows room for two railway trucks beneath or inside. The bridges are divided into three sets of two in a set, one of which contains a boiler and two engines. These engines operate the trolley and raise and lower the buckets by wire ropes. The engines are of about 25 horse-power. Steam is used instead of electricity, as it is more economical, the work not being continuous. Each bridge stands on three tracks, two under the pier and one under the shear legs, and each set of bridges may be moved the entire length of the quay independently, so as to be available in any one of the berths. The operation of each bridge is controlled by one man, and is effected by steam power from the same engine that works the buckets. Each bridge is hinged over the pier and pivoted on shear legs, so that it may be swung to a distance of 23 feet on either side of the center. The object of this is to allow a greater area of the quay to be covered, and it is also useful in preventing the twisting of the bridge in case of slipping of the wheels. There is another automatic arrangement by which the coal below the bridges may be scooped up and loaded into trucks or barges. This is done by a scoop bucket, and is absolutely independent of manual labor. The weight of the entire plant is about 800 tons. All the material is soft steel, combining the greatest strength with lightness.

OCTOBER GALES.

The Dominion Meteorological Service Weather Chart has the following: In October, during the last twenty-eight years, 1873, to 1900, inclusive, 106 gales have occurred in the Lake regions; 50 of these were heavy and the remaining 56 were moderate in fifteen cases the winds backed, and in 91 they veered. In the St. Lawrence Valley and Gulf, 104 gales occurred, 59 being heavy and 45 moderate. In 28 cases the wind backed, and in 76 they veered. October and November are months in which severe storms frequently occur on the lakes. In these autumn storms on Lake Erie and Ontario, the wind commences at the southeast, works around through south to west and northwest, the time of hardest blow being usually when the barometer

begins to rise as the winds get around to the west. On Lake Huron and the Georgian Bay the wind—though for the most part changing as on the Lower Lakes—not infrequently changes with great suddenness, chopping after a lull from south, southeast to northwest and blowing hardest as a rule from northwest. In October and November many severe gales are experienced also in the St. Lawrence Valley, the Gulf and the Maritime Provinces, and mariners are advised to be guided by the daily bulletins, as well as to watch carefully for the display of storm signals.

A JAPANESE SEAPORT.

Yeija Nakajima, chief engineer of the city of Tokio, Japan and professor of engineering and mechanics in the University of Tokio, is in this country on a tour of inspection. In an interview, he said: "After a careful examination of your rivers, harbors and wharfs, I have arrived at the belief that I can, by dredging, bring big ships up to Tokio. We are about 20 miles from Yokohama, and there will be a lot of work to be done. Tokio has about 1,500,000 inhabitants, and her interests would be much greater if we had a waterway through which big vessels could pass to the city. Even at Yokohama vessels must be unloaded by lighters. It will cost about \$21,000,000 or your money, docks and all. The interest on money is high and counting interest it will amount to \$50,000,000 before the job will be finished. But I am sure the city will do the work. American methods will be followed."

TO RELIEVE BROOKLYN BRIDGE TRAFFIC.

W. Hildenbrand, superintendent of John A. Roebling's Sons, has a scheme for relieving the traffic on the Brooklyn bridge, which he not only considers practical, but it can be done at a cost of \$3,500,000 says Construction News. Mr. Hildenbrand is positive that another story could be added to the bridge without interfering with the traffic. It will, of course, be necessary to remodel the whole structure, but in such a way as to offer no interference to the present transportation. It would double the strength and double the present carrying capacity. Four new cables would be used, with new anchorages just back of the old ones. All the trolley and train traffic would be restricted to the lower deck of the bridge, which would leave the upper deck free for wagon and pedestrian traffic. Mr. Hildenbrand says he could strengthen the present structure with an expenditure of \$100,000 without disturbing a truss. It would take five years to complete the double-decker.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, October 12, 1901.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	1,646,000	776,000	281,000	15,000	435,000
Chicago	5,161,000	6,899,000	2,007,000	274,000	21,000
Detroit	553,000	101,000	62,000	163,000	27,000
Duluth	4,688,000	482,000	439,000	523,000	665,000
Fort William, Ont.	1,695,000	.....	.....	.....	.....
Milwaukee	119,000	168,000	450,000	36,000	162,000
Port Arthur, Ont.	95,000	.....	.....	.....	.....
Toledo	597,000	597,000	1,144,000	370,000	8,000
Toronto	27,000	.....	.....	.....	55,000
On Canals	473,000	413,000	118,000	.....	225,000
On Lakes	1,364,000	1,228,000	234,000	25,000	131,000
On Miss. River .....	.....	.....	.....	.....	.....
Grand Total	38,208,000	13,414,000	7,769,000	1,788,000	2,036,000
Corresponding Date, 1900	56,978,000	9,829,000	12,235,000	986,000	2,348,000
Increase for week	734,000	.....	.....	.....	42,000
Decrease " " .....	.....	612,000	519,000	12,000	.....

While the stock of grain at lake ports only is here given the total shows the figures for the entire country except the Pacific Slope.

THE latest return of the shipping built and building, owned and managed by Messrs. Elder, Dempster & Co., of Liverpool, shows that the total number of ships under the control of the firm is 141 vessels with a gross tonnage of 368,490 tons. There are 12 steamers building of 44,800 tons gross. In speed the figures are as follows: 17 knots, 1; 14 knots, 11; 13 knots 7; 12 knots, 12; under 12 knots, 110. Messrs. Elder, Dempster & Co. occupy the proud position of being in possession of the largest fleet of cargo and passenger steamers under the British flag. There are, however, two foreign lines—the Norddeutscher Lloyd and the Hamburg American line—which exceed in tonnage the Elder, Dempster fleet, but at the pace the English fleet is now traveling it is soon likely to top its German competitors.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Negligence—Collision—Where plaintiff, while in a boat anchored near the route of defendant's steamer, was injured by a collision with such steamer, defendant is not bound by opinions expressed by an employee, who could give no authority to any one to anchor at such place, and on whose opinion plaintiff had no right to rely. Chesley vs. Nantasket Beach Steamboat Co., 61 N. E. Rep. (Mass.) 50.

Collision.—Under Act Cong. June 7, 1897, c. 4, art. 15, providing that in a fog a vessel at anchor shall ring a bell or sound a blast of a fog horn, or equivalent signal, at intervals of not more than one minute, a fisherman in a boat, anchored during a fog near the channel of an inlet, and making no signals, cannot recover for collision with a steamer making proper signals. Chesley vs. Nantasket Beach Steamboat Co., 61 N. E. Rep. (Mass.) 59.

Suit for Compensation.—The fact that, in the adjustment of insurance and general average between the schooners, insurers, and cargo owner, a charge for the salvage services was taken into account, would not render the schooner liable for such services at suit of the owners of the tugs, being a matter with which the latter had no concern, nor would it constitute an admission of liability on the part of the schooner, entitled to weight, where it appears that her owners were not at the time advised of the relations existing between the several tugs. Fleming et al. vs. Lay et al., 109 Fed. Rep. (U. S.) 952.

Partnership—Essential Elements of Contract—Sharing of Losses.—The several owners of tugs employed in the towing business at the same port formed an association, selecting a manager who handled and managed all the vessels, collected the earnings, paid all the expenses, and distributed the profits of the business among the members in proportion to the agreed value of vessels owned by each. Held, that such association was a partnership, each member of which was responsible for the proper performance of a service contracted for by any one of the vessels, and liable for a loss occasioned by her negligence or unskillful navigation; an agreement to share losses being implied by law from the other terms of the contract, although not expressly incorporated. Fleming et al. vs. Lay et al., 109 Fed. Rep. (U. S.) 952.

Collision—Tug and Tow Overtaking Schooner—Negligent Navigation.—A schooner entering Hampton Roads in the night, and sailing free at a speed of three miles an hour, was overtaken and passed by a tug having a tow, on a 200-fathom line, and sailing at a speed of six miles on nearly a parallel course. The tug saw the schooner when 1500 feet distant, and passed her at a distance of 300 feet or more, but the tow failed to see her, until within 200 feet, and struck her directly astern. Held, that both tug and tow were in fault for the collision, the former in not keeping watch to see that the tow was following properly in passing the schooner, and the latter because of the failure of her master to follow the tug, that the schooner could not be held in fault, since, even conceding the claim of the tug which was denied that she changed her course after the tug passed, she could not, by such change, have brought about the collision, considering the relative speed of the vessels. The Doris, 108 Fed. Rep. (U. S.) 552.

Shipping—Construction of Charter—Termination.—Under the charter of a schooner, the charterers were to pay a per diem hire for a voyage and return to one of two designated ports. They selected the cargo and the voyage, within certain limits, and paid all expenses except the wages of the master. On the voyage the vessel met with a storm which drove her out of her course, resulted in the loss of a part of her cargo, and compelled her to seek a port of refuge, where the charterers, being involved in a controversy with the insurers of the cargo, ended the voyage, although the vessel, with slight repairs, requiring but a few days, could have proceeded with over half the cargo uninjured. Held, that the charter continued in force, and the charterers were liable for the hire of the vessel until her redelivery at the designated port; the delay and abandonment of the voyage resulting from ordinary perils of navigation, of which they assumed the risk, or from their own voluntary action. Nicolini et al. vs. Lutcher & Moore Lumber Co., 108 Fed. Rep. (U. S.) 550.

Service on Foreign Corporation—New York Statute.—Under Code Civ. Proc. § 432, providing that personal service of summons on a foreign corporation may be made, in the absence of the president, treasurer, or secretary, or any person designated by the corporation for that purpose, on "the cashier, a director or a managing agent within the state," provided the corporation has property within the state or the cause of action arose therein, which provisions are applicable to suits in the federal courts where the corporation does business in the state, and thereby impliedly assents to the conditions imposed by the statute, service of monition in a suit in admiralty in a district of New York for breach of a contract made in that state on a director of a foreign corporation found within the district, is a sufficient service on the corporation, where it has property within the state; and a leasehold interest in vessels within the state under a lease for the term of forty-nine years constitutes property, within the meaning of the statute. Reilly vs. Philadelphia & R. Ry. Co., 109 Fed. Rep. (U. S.) 349.



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regarded.

CLEVELAND, O., OCTOBER 17, 1901.

SCREW PROPELLERS.

Discussing interestingly a paper on screw propellers read before the Institution of Mechanical Engineers at Barrow, the London Engineer says that it is a noteworthy fact that, even at the present moment, although the screw propeller has been the most important simple mechanical device ever invented, its theory of action is very far from being settled. Generally speaking there are two views, each of which is fought for as though it were the only one which is correct. According to one the propeller really acts as a screw and screws itself forward in the water, and exerts force on the water a duration so short for each successive mass of water encountered by a blade that the inertia of the water may be regarded in a manner as offering a nearly infinite resistance, while according to the other view we have nothing but an accidental resemblance to the action of the screw. The blades push the water astern at a considerable angle to ship, and it is entirely misleading to talk of slip, because there is no reason whatever why the propeller should, would, could, might or ought to advance precisely the distance represented by the pitch at each revolution.

The controversy has much more than an academical interest. Every ship has, so to speak, a propeller proper to her which will give better results than any other propeller that ever was made; but so little is thoroughly known about the mode of action of a propeller that it is almost impossible to say whether any ship is or is not fitted with the best possible propeller. We learn that with 77 square feet of propeller surface the *Boma* had a slip of 3.5 to 5.3 per cent. yet with a propeller with the reduced surface of 70 feet the slip dropped to 2.0 per cent. This leads to the notion that slip is in some measure independent of blade area. But a deduction of this kind is not really justified. From time to time a new investigation of certain phenomena of ship propulsion takes place. Thus, for example, we have Mr. Sydney Barnaby inquiring into cavitation; Prof. Hele Shaw and Mr. Marson Niles, (formerly an officer of the U. S. Navy) on the flow of water; Mr. Mansell inquiring into the true formula for ship resistance and the power required for propulsion at various speeds; but for all practical purposes the designing of screw propellers is still thoroughly empirical, and it must remain so until their method of operation and what they really do with the water is better understood than it is at present.

In a long letter to the London Times, Lord Brassey takes a very optimistic view of the present condition of the British navy. Turning to ships, to which so much of the recent criticism has been directed, Lord Brassey makes a series of comparisons with a view to giving "a convincing answer to experts who take pessimistic views and a reasonable assurance to the public."

AERIAL TELEGRAPHY.

The recent international yacht races, off Sandy Hook, have settled one thing not connected with yachting and that is that there is lots to do before wireless telegraphy can be put into general use. Interference is the difficulty to be overcome, that is, to avoid the conflict between various sets of instruments working in the same field. The United States Navy Department has been very much interested in the development of a practical system of wireless telegraphy, the use of which in war might be of greatest value. The Baltimore Sun very pertinently states that the yacht races have shown that the time has not yet come for installing any system on our war vessels. Three systems were used during the races, and an officer was detailed to report upon them. The inquiry shows conclusively that none of the systems is free from interference. When the three instruments were working together it was impossible to read the messages sent. The operators finally agreed to divide the time in which the race was sailed, and no trouble was experienced, unless as frequently happened, one man would overrun his time, and another would begin to send messages. Naval officers point out that "interference" would be a serious matter to a squadron in time of war. It would be possible, it is true, to prevent an enemy from communicating with his ships, but the enemy would have the same facility for cutting off communication between American men-of-war. Until this serious objection is overcome, it is not regarded as likely that Rear-Admiral Bradford, who is in charge of the bureau of equipment, will feel disposed to recommend that the signal system now in force be abandoned and wireless telegraphy be installed on all vessels.

COMMERCE IN COAL IN 1901.

Coal from the United States is now finding its way into nearly all the coal consuming countries, and the exports are steadily increasing. The trade has doubled in value and trebled in tonnage since 1897. This has had the effect of giving the United States third place on the list of coal-exporting countries, while it is first in production.

For many years there was an impression abroad, which was carefully fostered by competing countries, that United States coal was of inferior quality and that no grade could compare with the Welsh product. Experience with the United States product is gradually but surely dispelling this illusion. United States coal is now finding markets in Canada, Germany, France, Belgium, Spain, Italy, Russia, Sweden, China, Japan, the West Indies, Mexico and the Central American States, while Brazil is experimenting with it.

According to the customs returns, as published by the Bureau of Statistics of the Treasury Department at Washington, the exports of coal during the fiscal year which ended June 30, 1901, were as follows: Anthracite, 1,912,080 tons, valued at \$8,425,803; bituminous, 5,764,069 tons, valued at \$13,891,693; the totals being 7,676,139 tons and \$22,317,496. In the previous fiscal year (1900) the exports were: Anthracite, 1,777,319 tons, worth \$7,564,088; bituminous, 5,411,329 worth \$11,938,725; the totals being 7,188,648 tons, worth \$19,502,813. This shows an increase for the fiscal year 1901 of 487,501 in the number of tons, and a gain of \$2,814,683 in the valuation of the exports.

STEAMBOAT INSPECTION SERVICE.

In spite of the secret service bureau which Supervising Inspector-General James A. Dumont wishes to make and has made, in so far as he is concerned, of the Steamboat Inspection Service branch of the Treasury Department, items occasionally sieve through the press regarding some of the forms of duty which his subordinates go through with.

As an instance, it is learned that the Milwaukee staff, composed of Messrs. Chipman, Fitzgerald, Collins, Swift and Whitney visited during the present year nearly every port from Kenosha down the lake to Washington Island and many ports located on several of the Wisconsin rivers. During this period 215 steam vessels were inspected and there are still sixteen boats that are to receive inspection papers before the close of the present season. In all the local officials will have inspected 231 boats when the 1901 navigation season comes to a close. Last year 265 vessels were inspected. Among the ports in the district are Kenosha, Racine, Milwaukee, Sheboygan, Manitowoc, Two Rivers, Kewaunee, Washington Island, Menasha, Oconto, Pesaukee, Sturgeon Bay, Appleton and Marinette. The Milwaukee office thus controls the entire steam shipping and all licensed officers on the west shore of Lake Michigan.

NAVAL ESTIMATES.

The estimates for the navy for the year ending June 30, 1903, have already been made public. The total amount is \$98,910,984, against \$77,924,535 appropriated for the current year. The chief increases are \$2,600,000 for construction, \$2,000,000 for armor, and \$129,355 in the appropriation for yards and docks.

Secretary Long, in speaking of the estimates, said that they were made with a due regard for the needs of the navy, and intimated that they had the approval of the administration. He spoke of the increased cost of the navy and said that the building of a battleship costing \$5,000,000 was not the end of its expense, as its maintenance was very costly. These estimates, he said, did not cover any recommendations for increase of the navy over that already authorized, but it is more than likely the Secretary will recommend three new battleships and two armored cruisers and a number of small gunboats.

Among the new items of importance in the estimates are the following: New battery for the Newark, \$175,000; new batteries for the Albany and New Orleans, \$200,000; reserve guns for ships of the navy, \$500,000; floating dry dock at Portsmouth, N. H., \$500,000, making the total for that yard \$1,644,575.

A total of \$1,127,700 for new works at the Boston navy yard, which includes a plant for housing and storing torpedo vessels and new buildings. The estimates for new improvements at the New York navy yard aggregate \$3,110,000, which includes \$2,000,000 for the purchase of land, and \$200,000 for barracks for enlisted men. The new estimated items for the Norfolk yard aggregate \$1,208,500, which includes \$350,000 for the purchase of land.

The estimates for the naval station at San Juan, Porto Rico, are \$2,613,000, and include \$1,000,000 for a masonry dry dock, \$500,000 for the purchase of land, \$250,000 for dredging, and \$200,000 for the extension of coaling facilities. An estimate of \$650,000 is made for a plant for housing and storing torpedo vessels at Pensacola. An estimate of \$108,000 is made for the naval station at Tutuila, Samoa. An estimate of \$381,000 is submitted for the Cavite naval station, which includes \$200,000 for a refrigerating plant. Estimates are made for a complete naval station at Olongapo, P. I., amounting to \$1,443,000.

Other estimates are: Naval magazine near Boston, \$500,000; naval magazine near Portsmouth, N. H., \$400,000; naval magazine, Puget Sound, \$100,000; defenses for insular naval stations and coal depots, \$500,000.

A SAILOR'S SNUG HARBOR.

Although he has made no systematic effort to promote the sailors' snug harbor of the Great Lakes, which was encouraged by resolution at the last annual meeting of the Lake Carriers' Association, Mr. George L. McCurdy, of Chicago, is receiving letters of encouragement from different parts of the country.

E. C. Dunbar, of Grand Haven, Mich., says in a letter to Mr. McCurdy: "I take pleasure in enclosing check for snug harbor entertainment. You and I, and all of us dry-land sailors, must depend, when old age comes, for snug harbor upon that portion of the lake sailor's earnings which we have been able to garner. Let us not begrudge a penny from the common earnings to him who matched his courage against our thrift, and made our foresight productive by his steadfast endurance."

Writing from Milwaukee, Capt. William Jamieson, says: "I was of course interested in your letter regarding this worthy undertaking for a deserving poor. After braving many dangers and having little left in life they find themselves stranded on dry land with no harbor of refuge in sight and no harbor in sight to look for in a land of plenty and overflowing. Something should be done for them, and on a large scale. You will please find my mite of \$5 enclosed for this most worthy object. I wish you the best of luck and God speed you in your undertaking."

OHIO FISHERY CRUISER.

The State Fish and Game Commission, Columbus, awarded to the McKinnon Iron Works Co., of Ashtabula, the contract for the construction of the fish patrol boat to be used on Lake Erie. The company's bid was \$11,575, and the last Legislature appropriated \$12,000 to cover the cost of constructing the boat.

The commission also adopted a resolution calling for the opening of the State fish hatchery at Sandusky. Horace Park, of Columbus, was elected superintendent.

THAT BEREHAVEN ROUTE.

Mr. Benedict W. Ginsburg, has an interesting article in the current issue of "The Traveler" regarding the Berehaven route. Dr. Ginsburg is not enamored of the new scheme, and he places before his readers some practical difficulties, which should give pause to its promoters. It is claimed that the sea passage to Berehaven from the United States would be four hours shorter than to Queenstown, but Dr. Ginsburg shows that this should be three hours only, and that if the distance from Berehaven to London is represented by fourteen hours, that between Queenstown and London should be less than twelve. The two long railway journeys, with a channel crossing between, would not, in his opinion, be attractive to the passengers, and this new route "would practically be solely a mail route." As to the safety of the approaches, he points out that that to Queenstown is rendered much safer by reason of the many excellent leading lights, while in making for Bantry Bay a steamer would have to pass north of these lights. "As a terminus Berehaven seems out of the question. The long and costly journey would prohibit a large passenger traffic from England or the Continent, and there is nothing local." Another practical difficulty, says the writer, is the question of speed. Recent Atlantic steamers have cost £600,000 to £700,000 apiece, and yet the speediest only makes 23½ knots, whereas 26 knots is spoken of for the four boats proposed to be put on this route, by a company with a capital of one million, and which is also to build extensive harbor works, and a long (34 miles) railway connection. The suggestion has been made that Berehaven is merely to be a port of call for steamers having Manchester for a terminus, and that the difficulties in the way are to be overcome by the adoption of turbine engines and the use of liquid fuel. A vessel which could attain the required speed would be 600 feet long, 63 feet beam, and 42 feet depth of hold, a displacement of 18,000 tons, and a load draft of 28 feet (this draft, it may be said in passing, would quite put the ship canal out of court), and would develop some 39,000 h. p. In conclusion the writer says: "I would, however, sum up by saying that though it is undoubtedly hard to divert steamship passengers from their settled routes, it may be done. But the attraction does not seem to be the mere giving of a short sea route for ocean passengers. What they look to is a saving in time over the whole transit between the place whence they start and that which is their final destination. They will go by the fastest steamship on the route they choose, because she saves them so many hours on their journey; but I doubt if they will seek to save a few hours at sea, if that entails a long and expensive land journey."

BRITISH VS. AMERICAN CHARTS.

At recent Board of Trade inquiries, including those into the losses of the steamers Assyrian and Delmar, it was advanced that a likely cause of the disasters was a grave discrepancy between the American and English charts in regard to the variations shown off Cape Race. Deeming the matter of great importance to shipping, the Merchant Service Guild asked the hydrographer to the British Admiralty (Admiral Sir J. L. Wharton, R.N., K.C.B.) to favor them with an authoritative communication for the future guidance of those responsible for the safe navigation of ships. The reply received was to the effect that the various curves shown on the Admiralty charts are drawn from the most recent observations in the possession of the Hydrographic Department and are believed to be correct.

It is safe to say, however, that the slight possible change in variation curves found on charts of recent issue would have no appreciable effect in shaping a course in the immediate locality of Cape Race. The wrecks may be ascribed to stronger currents than allowed for and inefficient fog signals. The latter is now being attended to by the Dominion government.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 11TH DISTRICT,
CHICAGO, ILL., October 9th, 1901.

BANK POINT BEACON LIGHT STATION.—Notice is hereby given that the Bank Point Beacon Light (destroyed by fire October 14, 1901) will be exhibited October 16, 1901, from a temporary frame.

This notice affects the "Lists of Lights and Fog Signals, Northern Lakes and Rivers, 1901," page 92, No. 453.

By order of the Light-House Board.

F. M. SYMONDS, Comdr. U. S. N.,
Inspector Ninth Light-House District.

LAKE FREIGHTS.

Ore tonnage is in fair demand, with Escanaba quoted at 65 cents and 90 cents from the head of the lakes.

Coal is being shipped as promptly as possible at a 60 cent rate to Chicago or Milwaukee and 35 cents to Duluth. Vessels have been changing from Ohio ports to Buffalo.

Lumber rates are now solid at \$3 from the head of the lakes with about a couple more trips to figure on. From Lake Huron ports to Buffalo, \$2.50 has been offered this week.

The grain trade is dull and vessels chartered ahead at the 3½ cents, Lake Superior, are not being furnished cargoes. Chicago quotations remain at 1¼ cents on corn and ½ cent better for wheat with light shipments.

CONTRACT FOR LARGE STEEL STEAMER.

The American Ship Building Co. closed a contract this week for the construction of a large steel steamer for the general cargo trade, to be built to the order of the Western Transit Co. Buffalo, for June delivery 1902.

The new steamer will be a sister ship to the Chicago recently launched at Buffalo and for the same owners. Her general specifications are, 343 feet over all, 325 feet keel, 44 feet beam and 28 feet deep. She will have quadruple expansion engines with cylinders of 19, 27½, 40 and 58 inches with 40 inch stroke. Steam will be furnished by three Scotch boilers 11½ feet in diameter. She is to be built at the South Chicago yards of the company and the cost is estimated at \$275,000.

LETTERS AT DETROIT MARINE POST OFFICE.

OCTOBER 16, 1901.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Ackley Geo. M.	Monsow James
Andrews Dan	Morrell Orien F.
Brown Walter R., Str. Topeka	Maroney Dennis, 2, Str.
Boucher Jos., 4, Str. Helvetia	Manola
Brown V., 117	McGuffin Erven
Blair Chas. J.	McSweeney W. J.
Bembe Anthony, City of Cleveland	McLarty A. J.
Benke Anthony, City of Cleveland	McCue Patrick, Str. Washington
Ball Will	McDonald John, Str. J. M. Hutchinson
Clark Norman, Str. Rowley	Nicolson J. M., City of Cleveland
Clayton A., Str. Iroquois	O'Brien Thos.
Cook Wade, 2, Str. Geo. Peavy	Pentzien Chas., 3, 117
Donaldson Alex.	Patterson Wm., 2, Str. James
Davenport Albert, Str. Pennsylvania	Pederson Johan Oscar
Elliott Jim	Prout Wm., Str. Penobscot
Elliott Wm., Str. Bangor	Poole H., Str. Glasgow
Edwards John, Str. Leuty	Purcell Billy, Str. Helvetia
Fox Jas. H., Str. Colonial	Ratt Will P., Str. Marigold
Golden Mathew, Str. J. Duncan	Robbins Frank, Str. J. E. Hall
Gast F. S., Str. Troy	Robbins Fred H., 5, Str.
Giddings Jas., Str. Peshtigo	Colonel
Guibean Abel, Str. Hoyt	Shaw Wm., Str. Nimick
Gage W., Str. Hanaford	Stedman C. W., Str. Iron Duke
Gaswell H. J., Str. Hutchinson	Shafer J. F., Str. R. Fulton
Hansen Hans J., Str. Swain	Sullivan Daniel, Str. Mars
Huelsman Levy, Str. Theano	Shaw Mrs. Wm. G., Str.
Kromrey Edw., Str. J. Owen	Grummond
Lott Edgar, Str. Marsala	Sullivan H. P., Str. Sevona
Lown L., Str. Black Rock	Smith Samuel
Lyons Harry, Str. M. M. Drake	Thomas Wm.
Larson Reinhart, 2, Str. Fedora	Tibbals Robt., 2, Str. Dunbar
Leitch John	Walsh F. J., Str. Black Rock
Murray Hugh, Str. Bessemer	Yax P. H., Str. Merrimac
Miller Chas.	Young John C., Str. Manola
	F. B. DICKERSON, P. M.

TREASURY DECISIONS.

ALIEN SEAMEN.

Held that the question of collecting head tax on alien seamen discharged or deserting from vessels at ports of the United States, as well as the question of examining such seamen under the laws regulating immigration, must be determined upon the facts developed after due investigation in each case.

TREASURY DEPARTMENT, October 3, 1901.

SIR: Referring to a question raised by you in a letter dated March 26, 1901, having reference to the collection of head tax provided by the act approved August 3, 1882, as amended by the act approved August 18, 1894, in the case of alien seamen discharged or deserting from the vessels of which they constitute the crew, or a portion thereof, while the said vessels are temporarily in your port, the Department incloses herewith, for your information and guidance, copy of an opinion rendered by the Attorney-General of the United States.

Respectfully,

M. E. AILES, Assistant Secretary.

COLLECTOR OF CUSTOMS, San Francisco, Cal.

* * *

With these general observations, let me refer to the particular case upon which you submit your request for an opinion. In the case of the British steamship Columbia it appears that some eight alien seamen of that vessel, after deserting her, libeled her for unpaid wages, and thereupon, in order to sail, the representatives of the owners of the ship paid to the attorneys for the members of said crew the amount due them for wages. They were never regularly discharged. This meager statement of fact does not show whether the sailors in question came to this country in pursuit of their calling as seamen in good faith and without any purpose of entering this country as immigrants. They may have left the ship by reason of dissatisfaction, and with the intention of again shipping as seamen on the first outward ship and without any purpose of abandoning their calling. It is not my duty, and I could not determine this question of good faith or intention from the meager facts submitted to me. I am satisfied, however, that it is within your power to detain and examine such alien seamen, and to deport them, if you are satisfied that they intended to remain within this country. You are not obliged to remain inactive when so easy an entrance through our immigration barrier is being effected.

Replying to the inquiry in your letter of April 2, 1901, I think the liability of these alien seamen to pay the head money under the act of August 3, 1882, depends upon the same question of intention, and must be dealt with accordingly as a matter of fact to be decided in accordance with the evidence of each particular case. If they shipped as seamen as a convenient method of securing passage to this country, and for the purpose of entering therein as other alien immigrants, then they are passengers and subject to the capitation tax. But if they shipped with the intention in good faith to continue their occupation as seamen, and with no intention to make entry into this country, then they are not passengers, and are exempt from the tax in question.

Respectfully,

JAMES M. BECK, Acting Attorney-General.

The Secretary of the Treasury.

INSPECTED THE "SOO" CANAL.

The Sault Ste. Marie canal, one of the most important waterways in the world, was inspected by government officers during the past few days. Among those in the inspection party were Congressmen Esch and Jenkins, of Wisconsin, Congressman Burke, of South Dakota, Senators Knute Nelson and Moses E. Clapp, of Minnesota, the latter a member of the United States commission of commerce, Congressmen Tawney, McCleary, Edey, Stevens, Fletcher and Morris, the latter a member of the river and harbor commission.

The visit to the "Soo" was, in a measure, unofficial, and was made chiefly so that the members of the different committees and the Senators and Congressmen would know exactly what to do when the question comes up at the next session. Mr. Esch intimated that a proper appropriation would be made to improve the canal, which, he said, was the most important waterway in the world.

THE standard automatic releasing hooks for the lower blocks of boats' davit tackle falls will be placed on the boats of the two large steel steamers now building at New London, Conn., to the order of J. J. Hill, president of the Great Northern Railway.

Salvage—Right to Compensation—Tug Association.—A tug-line association was formed by the owners of all the tugs operating from a certain port, the agreement providing that the vessels should be under a common management, and their net earnings should be divided upon an agreed basis. One of such tugs, by negligent navigation, caused the stranding of a schooner which she was towing in a place of great peril, and procured other tugs and vessels of the association to come to her assistance. With their aid the schooner and greater part of her cargo were saved, with some loss and damage. Held that, whether the association be regarded as a partnership or not, the services performed by the assisting tugs were rendered to the association, and not to the schooner, and that she was not liable thereto. *Fleming et al. vs. Lay et al., 109 Fed. Rep. (U. S.) 952.*



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NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN, ILLINOIS AND WISCONSIN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., Oct. 9, 1901.

LAKE MICHIGAN, GREEN BAY, ETC., BUOYAGE.—Notice is hereby given that the work of changing the iron buoys in the Ninth Light-House District, for the winter, to spar buoys, similarly painted, will begin on the dates below:

Gas-lighted buoys, entrance to Fox river, Green Bay, Wis., November 7.

Gas-lighted, bell and iron buoys in Green Bay, channels between Lake Michigan and Green Bay, on Wiggins Point Shoal, and in Sturgeon Bay, Wisconsin and Michigan, November 8.

Gas-lighted buoys, Fox Island and Rush Shoal buoys, Lake Michigan, Michigan, November 12.

Mackinac Straits (west of Old Mackinac light station) and channels north and east of Beaver Island Group, Michigan, November 15.

Off Sheboygan, Wis., November 18.

Off Milwaukee and Racine, Wis., November 21.

Off Chicago, Ill., November 28.

By order of the Light-House Board:

N. H. FAROUHAR,
Rear-Admiral, U. S. Navy, Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DISTRICT,
CHICAGO, ILL., Oct 11, 1901.

VIENNA SHOAL BUOY.—Notice is hereby given that the red and black, horizontal, striped, second-class can buoy, marking the northwest point of Vienna Shoal, northerly end of Lake Michigan, reported adrift September 28, 1901, has been replaced.

BANK POINT BEACON LIGHT STATION.—Notice is hereby given that on the evening of October 14, 1901, the Bank Point Beacon Light Station, Michigan, was destroyed by fire. The light will be re-established at the earliest practicable date.

By order of the Light-House Board.

F. M. SYMONDS, Commander, U. S. N.,
Inspector 9th L. H. District.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 10TH DISTRICT,
BUFFALO, N. Y., Oct. 15, 1901.

ERIE HARBOR, PA.—Notice is hereby given that on October 14, 1901, Outer Black Spar Buoy No. 1, which marks the south side of the entrance to the channel in Presquile bay, Lake Erie, was established about 300 feet west by north from its former position. At the same time to better mark the inner end of the channel into Presquile bay, Inner Black Spar Buoy No. 7 was established about 375 feet southwest $\frac{1}{4}$ west from its previous location.

By order of the Light-House Board.

A. DUNLAP, Commander, U. S. N.,
Inspector 10th Light-House District.

DOMINION OF CANADA—ONTARIO.

I. CHANGE IN COLOR OF PORT ARTHUR LIGHT.—On the night of the 15th October, 1901, the light shown from the light-house on the breakwater at the entrance to the inner harbor of Port Arthur, Thunder Bay, Lake Superior, will be changed in character from fixed white to fixed red, and will thereafter be maintained as a fixed red light, without further notice.

The limit of visibility of the light will be reduced by this change from 11 to 7 miles; in other respects the light will be unaltered.

II. PORT ARTHUR AND FORT WILLIAM—HYDROGRAPHIC NOTES.—The inner harbor at Port Arthur is formed by two cribwork breakwaters, extending in front of the wharves on the water front of the town. The more northerly breakwater is 3,600 feet long, and has a general trend of S. 25° W. true from a point outside the elevator wharf at the north end of

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the town. The light-house is on this breakwater, 31 feet from its south end. Between this breakwater and the more southerly one is the entrance to the inner harbor, a gap about 340 feet wide. The more southerly breakwater is 1,500 feet long, and runs S. $28\frac{1}{2}^{\circ}$ W. true.

The statements respecting dredging under the head "Port Arthur," on page 72, of United States Hydrographic Office publication, No. 108A, 1900, refer to work done at the mouth of the Kaministiquia river, leading up to Fort William, and not to Port Arthur.

(Information furnished by the Chief Engineer of the Department.)

III. VICTORIA ISLAND—POSITION OF LIGHT-HOUSE.—The United States Hydrographic Office has received information that the light-house on Victoria Island, north shore of Lake Superior, is situated at the northwestern extremity of the western end of the island, and not near the middle of the island, as shown on Admiralty charts Nos. 321 and 320. The keeper's dwelling is located in a southwesterly direction from the light-house, and the alignment of these two objects passes over the rocky spot with three feet of water over it shown on the chart about one mile to the southwestward.

This shoal is stated to be somewhat to the westward of the position assigned to it on the chart.

UNITED STATES OF AMERICA—LAKE SUPERIOR.

IV. CURRENT ON SOUTH SHORE.—Capt. W. A. Williams, of the steamer Spokane, reports to the U. S. Hydrographic Office that the body referred to in part IV of notice to mariners No. 53, of 1901, was picked up off Manitou Island, to the eastward of Eagle river, and not off Outer Island. Consequently the statement respecting a westerly set of current in the notice referred to should be amended.

This notice affects Admiralty chart No. 320, and U. S. H. O. publications No. 108, 1896, page 3, and No. 108a, 1900, pages 9 and 10.

V. SHOAL OFF GULL ISLAND, APOSTLES GROUP.—The U. S. H. O. reports, under date 9th September, 1901, that the U. S. lake survey steamer Vidette reports a small shoal in the Apostle Island bearing N. E. $\frac{1}{8}$ N. (N. 44° E. true) distance $3\frac{1}{10}$ ($3\frac{8}{10}$) miles from the north point of Gull Island.

It is about 100 feet in diameter and consists of a cluster of boulders with a least depth of $1\frac{1}{2}$ feet at the present stage of water in Lake Superior.

This notice affects Admiralty chart No. 320 and U. S. H. O. publications No. 108, 1896, page 38, and 108a, 1900, page 43.

VI. COLOR OF DEVILS ISLAND LIGHT-HOUSE.—The United States Light-House Board gives notice that the new light-house tower on Devils Island, Apostles group, described in part VII of notice to mariners No. 59 of 1901, has been changed in color from brown to white.

VII. DULUTH RANGE LIGHT STATION.—Further, that on or about 1st September, 1901, the following described range lights and fog signal will be established on the new south pier at the entrance to Duluth harbor from Lake Superior:

Front Light.—A fixed red light of the fourth order, 44 feet above lake level, on a buff-colored brick tower, surmounted by a black gallery deck and lantern, attached to a small fog signal house with a red roof, on the outer end of the new south pier, from which will be sounded, during thick or foggy weather, a ten-inch steam whistle having the same characteristics as the temporary signal, viz., blasts of 5 seconds' duration separated by silent intervals of 30 seconds, thus:

Blast	Silent interval	Blast	Silent interval
5 sec.	30 sec.	5 sec.	30 sec.

Rear Light.—A fixed red light varied by a red flash every 10 seconds, of the fourth order, 69 feet above lake level, on a white, square, pyramidal tower surrounding a white cylinder, surmounted by a white cylindrical watch room and black lantern, near the inner end of the new south pier, 1,188 feet S. W. by W. $\frac{1}{4}$ W. in rear of the front light.

On the same date the present temporary range lights and fog signal will be discontinued.

This notice affects admiralty chart No. 320.

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Burn Continuously

from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

Controlled by

THE SAFETY CAR HEATING AND LIGHTING CO.
160 Broadway, New York City.

LONE ROCK BELL BOUY DRIFTED FROM STATION. Notice has been received by this Department that the bell buoy marking Lone rock, east side of Georgian Bay, district of Parry Sound, Ontario, has disappeared from its station.

BLACK ROCK BEACON BLOWN DOWN. The department is also advised that the beacon marking Black rock, in the entrance to Parry sound, in the same waters, was blown down by a recent gale.

F. GOURDEAU,
Deputy Minister of Marine and Fisheries,
Department of Marine and Fisheries,
Ottawa, Canada, 28th September, 1901.

All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

MARINE PATENTS.

684,311. Boat. Sato Ruji, San Francisco, Cal.
684,136. Apparatus for hydraulically transporting subaqueous solids. Charles Vivan, Islip; and Harry R. Wheeler, Brooklyn, N. Y.

683,427. Fluid-pressure steering-gear. Lucas Barger, New York, N. Y.
683,516. Dredging-machines. Edward A. Stanton, Frankfort, Ind.

683,540. Oar-lock. William C. Wilson, Philadelphia, Pa.
683,540. Indicator and recorder for pitch or roll of vessels. William F. C. Nindeman, New York, N. Y.

683,776. Paddle-wheel. Henry S. Kline, McKeesport, Pa.

683,808. Screw-propellor blade. Sommers N. Smith, Philadelphia, Pa.

683,818. Ship's light or window. Thomas Utley, Liverpool, England.

683,870. Dredge-bucket. James O. Wright, New Orleans, La.

682,476. Rudder. John Marolf, Tillamook, Oregon.
682,584. Means for locating course of sound. Mario R. d'Asar, Genoa, Italy.

Design 35,031. Boat cleat. John F. W. Schmidt, Oshkosh, Wis. Term of patent, 14 years.

682,376. Hank. William Wood, Banta, Cal., assignor of one-half to George John fake, Vernalis, Cal.

682,631. Vessel or ship. Paul Manchin and Louis Boudreux, Paris, France.

682,967. Oar lock. James White and John Snyder, Marshfield, Oregon.

683,063. Means for conveying power to dredges. William O'Brien, Jr., Waipori, New Zealand.

683,219. Caisson. William H. McFadden, Pittsburg, Pa., assignor to the Consolidated Mining and Dredging Company, same place.

683,238. Night light buoy. Conrad C. A. E. Wiese, Hamburg, Germany.

683,246. Lighter or barge for handling coal or other material. Jeremiah Campbell, Newton, Mass.

683,260. Life boat. John E. Dysart, Cadiz, Ohio.

683,361. Diving Apparatus. John L. Watson, Los Angeles, Cal.

683,400. Submarine boat. John P. Holland, Newark, N. J., assignor to Electric Boat Company, of New Jersey.

CONSUL-GENERAL GUENTHER reports from Frankfort, August 28, 1901: The next international navigation congress will be held at Dusseldorf, Germany, June 29 to July 6, 1902. There will be two sections, one for inland, the other for ocean navigation. In the former the following will be discussed: Hoisting machinery; coal transportation on canals; dams; mechanical starting of vessels; the utilization of water power of locks for generating electricity. In the section for ocean transportation, discussion will touch: The use of lighter ships on the seas; the construction and maintenance of dry and repair docks; the construction and cost of dredging machinery.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 18...	E. 13° S.	= S. 6½ E.	= E. by S. ½ S.
Oct. 21...	E. 14° S.	= S. 6¾ E.	= E. by S. ¼ S.
Oct. 24...	E. 15° S.	= S. 6½ E.	= E. by S. ¾ S.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION
LAKE MICHIGAN, LAT. 44° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 18...	E. 13° S.	= S. 6½ E.	= E. by S. ¾ S.
Oct. 21...	E. 15° S.	= S. 6¾ E.	= E. by S. ¾ S.
Oct. 24...	E. 16° S.	= S. 6½ E.	= E. by S. ½ S.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
Oct. 18...	E. 14° S.	= S. 6¾ E.	= E. by S. ¼ S.
Oct. 21...	E. 15° S.	= S. 6¾ E.	= E. by S. ¾ S.
Oct. 24...	E. 17° S.	= S. 6½ E.	= E. by S. ½ S.

LAKE SUPERIOR, LAT. 48° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
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Oct. 18...	E. 14° S.	= S. 6¾ E.	= E. by S. ¼ S.
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Oct. 21...	E. 16° S.	= S. 6¾ E.	= E. by S. ¾ S.
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Oct. 24...	E. 17° S.	= S. 6½ E.	= E. by S. ½ S.
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With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

**NEW LINES OF THE HAMBURG-AMERICAN
STEAMSHIP CO.**

It is reported on good authority, states the U. S. Consul-General, at Frankfort, that four new lines are to be incorporated with the Hamburg-American Line:

(1) The "Jebsen" Line, between Shanghai and Tsintau. This line was subsidized by the German Government; it is proposed to enlarge the service and extend it to Chefoo and Tientsin, the Hamburg-American Line wishing to gain part of the Chinese shore trade.

(2) The share held by the Bremen firm of Rickmers in a line operated on the Yangtze by the North German Lloyd. It is expected that the Yangtze commerce will soon increase greatly. The North German Lloyd and the Hamburg-American Line in this case work together.

(3) The third project is the regular East Asia and San Francisco route, by which (using the overland route between San Francisco and New York) a more rapid communication with the East will be secured than via the Suez canal.

(4) The fourth enterprise is the purchase of the British Atlas Line, operating between New York, the West Indies, and South America.

A LARGE WHEEL FOR MINING PURPOSES.

The Robert Poole & Son Company, iron founders and machinists, at Woodberry, Baltimore, Md., is finishing what is said to be the largest wheel of its kind in the world. The wheel is 65 feet in diameter, and, with its supports, will weigh over 500 tons. The Railway and Engineering Review, Chicago, states that the order was placed by the Calumet & Hecla Mining Co. to carry away the refuse from the stamp mills at one of the great mines on Lake Superior. Upon the wheel, which is known as a sand wheel, will be arranged 550 buckets, each measuring 4 ft. 6 in. by 3 ft. As the wheel revolves each bucket will scoop up its capacity of earth and refuse, which it will dump into a trough at the top of the wheel, whence it will be carried away by the water in a sluiceway. The axle is 27 ft. long, 32 in. in diameter, with a 26-inch hole through the center, and weighs 21 tons. The wheel was laid off in 20 segments, and built up in sections. It consists of two concentric rings, one on the inside for the purpose of strengthening the entire structure, and another outside, consisting of a toothed rim fastened to the inside rim with bolts. Running from the hubs on the ends of the shaft to the segment are 40 steel spokes, built on the principle of a bicycle wheel, and arranged with special nuts and threads for fine adjustments when the wheel is finally set up at the mine. When put into actual use the wheel will be operated by an electric motor of about 700 h. p. Its motive power will be communicated to the big wheel by gearing. Upon each segment of the big wheel are 29 teeth, or a total of 520. The smaller wheel or pinion, by which it will be driven, is 3 feet in diameter. When working at the mines it is expected that the big wheel will make 10 revolutions per minute. It is expected that the wheel will be ready for delivery in about four months, when 30 or 40 gondola cars will be required for its transportation, several of which will have to be built especially for the accommodation of the large castings.

ELECTRICITY VS. STEAM ON SMALL BOATS.

Referring to the fact that electrically propelled boats have already ceased to be a novelty among us, though the fact has probably escaped the attention of the public at large, owing to the greater publicity given to the transformation of tram and railway lines into electric lines, a writer in Feilden's Magazine, in order to point out the advantages secured by using electricity instead of steam on most of the smaller vessels, gives the summary of an article on the subject published recently by Mr. E. W. Ehnert, in a German engineering paper, from which we quote the following: "Cleanliness and decreased vibration are in themselves strong points in favor of using electric energy, but what in time will definitely decide the choice as far as pilot boats and harbor police boats, for instance, are concerned, is the fact that for all boats that are in constant demand the annual cost where electricity is used is considerably less than where steam furnishes the propelling power. Boats that must be in readiness at a moment's notice, if steam is used in them, have to keep steam up, whether moving or at rest, and consequently waste a great amount of fuel. If electricity is used the current can be shut off and restarted at any moment, so there is no waste of energy and fuel while the boat is at rest. The best method of using electric energy in boats under the present conditions appears to be the employment of accumulators; and, as Mr. Ehnert points out, experience seems to show that the old-fashioned Plante type accumulators are preferable, notwithstanding their greater weight.

and cost, to those with paste plates. There are, no doubt, many other cases in which electrically driven boats will supersede those propelled by steam, and the increase of their number will lead to the increase of charging stations on the banks of rivers and lake shores, thus extending the limited radius within which electric boats at present can be used. This adds another reason to the many which should induce manufacturers to secure at last a reasonable share of the profits that during the present century will be derived from electrical engineering.

EXPANSION IN USE OF STEEL.

The Carnegie ship plate plant is to be enlarged at a cost of \$3,250,000. The pressed steel car plant will be extended at a cost of \$4,500,000. This latter enlargement is to enable the company to manufacture steel car wheels of improved design.

These facts indicate a growing demand for steel and iron by the concerns that provide the means of transportation on sea and on land. The ship yards of America are pushed far beyond their capacity and are preparing to accommodate a larger amount of construction. The expansion in the ship-building line will be something very great in the next few years.

Besides these large items of demand for steel, there are smaller ones that are more or less new, and some of which promise to grow to large proportions. The tendency is to substitute steel for wood in the construction of river, lake, canal and harbor barges, and the change must finally use up a vast amount of metal. It cannot be very long before steel will be substituted for wood in the frame work of all passenger coaches and sleeping cars.

Wood is becoming scarce and dear. Its inferiority to steel in a great many kinds of construction has long been known. These two facts make the substitution of the latter only a matter of time.

In view of the statements which have been made arising out of the loss of the steamers Assyrian and Delmar, to the effect that the disasters might have arisen through the grave discrepancy between the British and American charts in regard to the variation shown off Cape Race, the following pronouncement from Admiral Sir W. J. L. Wharton, hydrographer to the Admiralty, will be read with interest: "The variation curves shown on the Admiralty charts are drawn from the most recent observations in the possession of the Hydrographic Department, and are believed to be correct." This implies of course, that the American data is not correct, and it is to be hoped, in the interest of navigators, that the United States Bureau of Shipping will take notice of Admiral Wharton's statement.—Syren and Shipping, London.



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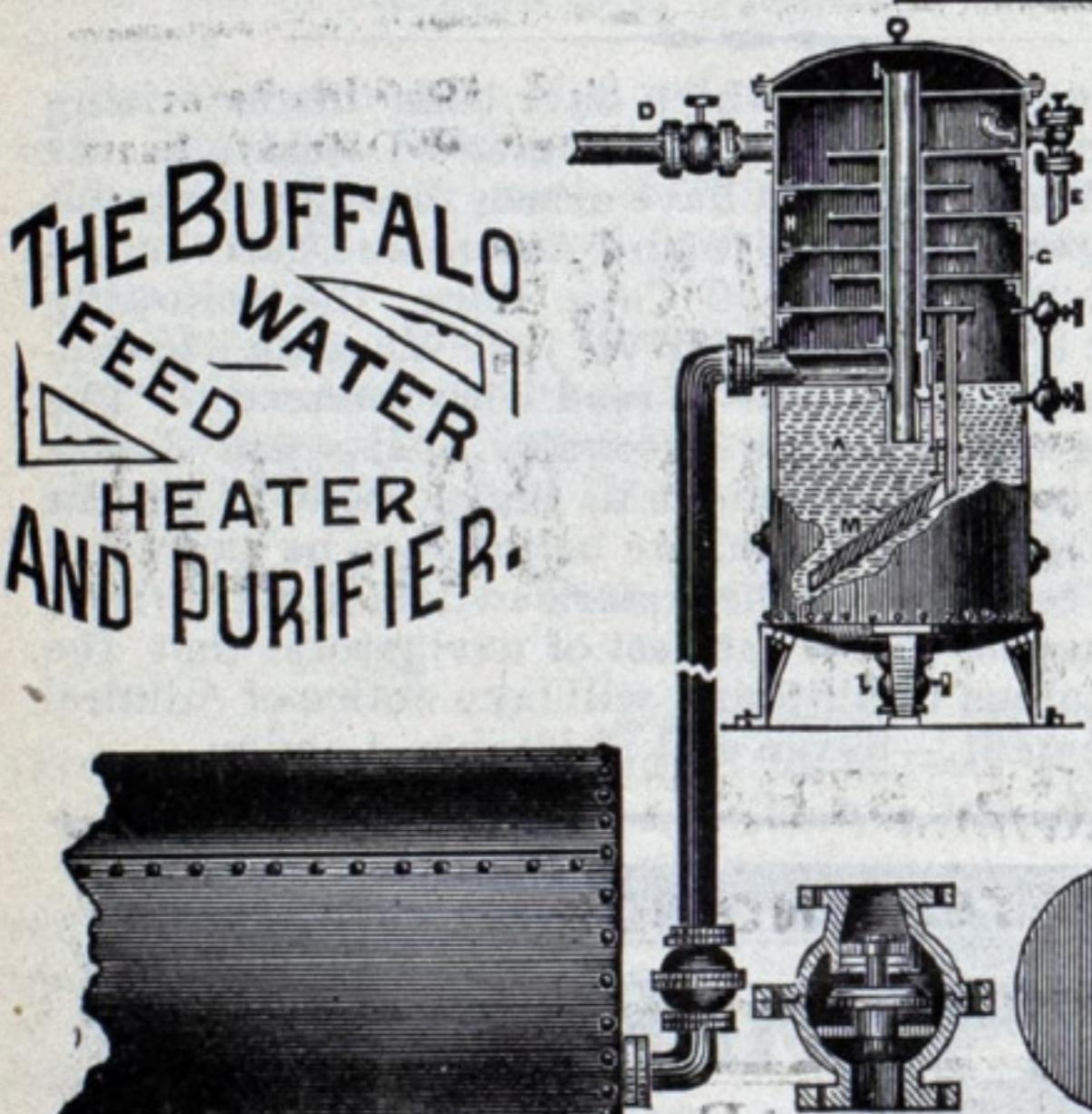
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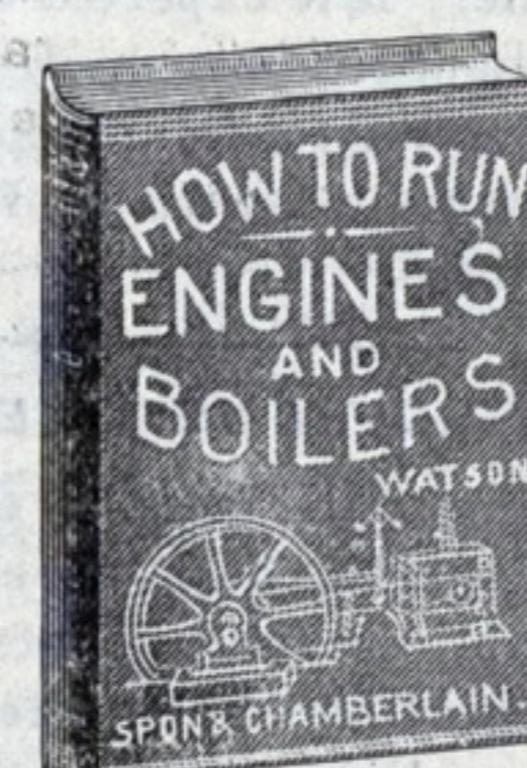
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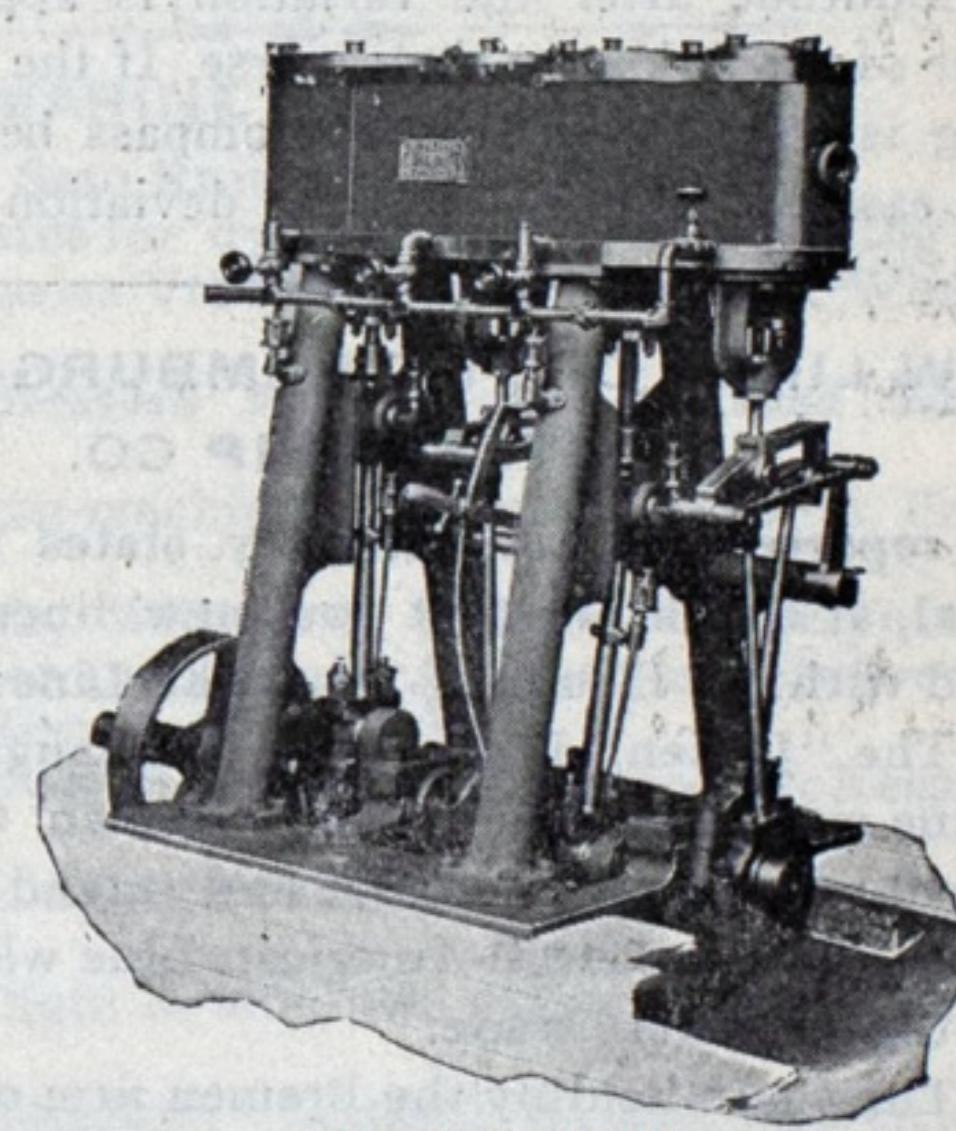
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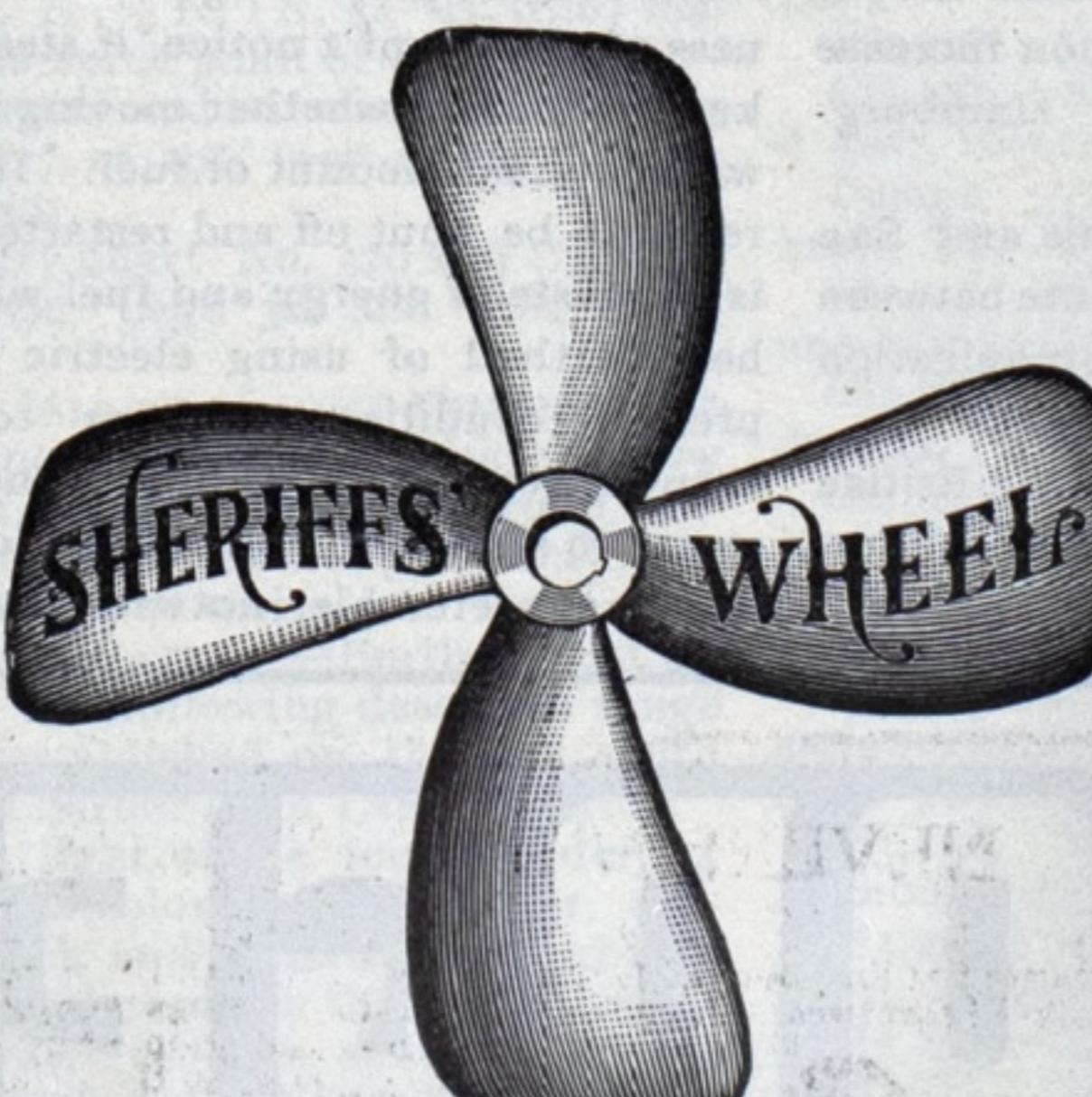
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FLOTSAM, JETSAM AND LAGAN.

Capt. Henry Balfour, late of the schooner Keweenaw, whose home was at Marine City, died at the marine hospital, Sault Ste. Marie, on Tuesday.

The Marconi Wireless Telegraphy Co. and Lloyd's Shipping Agency, in London, have entered into an agreement whereby the stations of the agency throughout the world are to be equipped with wireless telegraphy.

The steamer John N. Glidden collided with the end of No. 3 ore dock at Escanaba on Tuesday and sank in a short time. The crew escaped. The Glidden was loaded with iron ore, and in getting away from the dock the collision occurred.

The directors of the Cunard Co., having satisfied themselves of the utility of the Marconi system of wireless telegraphy by its trial on the Lucania, have now decided to fit the system on the whole of their Saturday mail-boats between Liverpool and New York.

Efforts are being made by the National Board of Steam Navigation to have motor craft of all kinds placed under control of the United States steamboat inspectors. A bill will be drawn up and presented to Congress requiring the smallest gasoline or naphtha launch, dinghy or tender to be placed under the charge of a licensed engineer.

The big floating steel dry-dock, built at Sparrow's Point, Md., and destined for the naval station at Algiers, La., started on its journey south. The risks of the voyage are assumed by the builders of the dock, an arrangement having been made by which the government will not come into possession of the dock until delivered at its destination.

Captain J. H. Cameron, of the bark Theobald, reports to the branch hydrographic office, San Francisco, that on June 10, 1901, at 2 a. m., while running along with a moderate breeze and a perfectly smooth sea, a sea rolled up, breaking all over the vessel. It was accompanied by a rumbling sound, which lasted for about a half hour, when the sea be-

came perfectly smooth again. Latitude N. 54° 18', longitude W. 164° 10'.

An Ottawa man suggests to the Montreal Harbor Commissioners a novel idea for keeping the channel between Quebec and Montreal open during the winter months. He would have a number of tugs engaged to break the ice. These boats would store the ice, and then sell it to defray their expenditure. He was not prepared to give an estimate of the cost of the work, nor the revenue to be derived from the sale of the ice.

One of the directors of the Norwegian fisheries has been endeavoring to discover the height a salmon will leap when clearing a waterfall which obstructs its passage up stream. Masts were placed below the fall to insure accurate measurements. It is stated that a fish can leap to the height of 20 feet. When a fish failed to clear the fall at one bound, it remained in the falling water, and then, with a rapid twist to the body, gave a spring and was successful.

An excellent story was told at a recent meeting of the Pharmaceutical Society of Great Britain. It appears that on board a certain ship there was a well-stocked medical chest, with ample instructions for the use of the contents, but no doctor. A sailor fell ill, and displayed symptoms which required a dose from No. 9 bottle. The bottle in question, however, was empty. "Never mind," said the captain, "give him equal parts of 4 and 5."

As to the disaster which recently befell the British turbine torpedo boat destroyer Cobra, it is reported from London that the Admiralty themselves incline to accept the belief that the construction of the vessel was faulty. In order to obtain a speed of 40 miles an hour the vessel's plates were made very thin, while the machinery was abnormally heavy. The result was that when the boat caught bow and stern on the crest of two waves it broke amidships of its own weight.

VESSELS CLASSED.

The vessels classed and rated this week, by the American Bureau of Shipping in the "Record of American and Foreign Shipping," New York, are as follows: Screw steamer Hydrographer, schooner Baker Palmer, schooner Sallie C. Marvel, schooner Santo Oteri, 3 masted schooner Lejoy, 3 masted schooner Evie B. Hall, 3 masted schooner Anna E. J. Morse, 3 masted schooner Normandy, 3 masted schooner Carrie Bell, 3 masted schooner Grace Davis, British half brig Ora, British barkentine Emma R. Smith, British 3 masted schooner Edyth, British 3 masted schooner W. S. Fielding, British 3 masted schooner Brooklyn and Norwegian bark Finn.

Obstructing Officers—Execution of Process—Construction Statute.—Where a United States commissioner, having adjudged certain persons deserting seamen from a British ship, on complaint of a British consul, instead of ordering them delivered to the consul, as required by the treaty and statute, in excess of authority ordered them restored to the ship "under the directions" of the consul, the marshal, in carrying out the directions of the consul to deliver the seamen to the ship by delivering them to the master on board thereof, acts as the consul's agent, and not in the execution of any legal writ or process, and persons who interfere with him while so acting by forcibly taking his prisoners from his custody are not guilty of a violation of Rev. St. §5398, which makes it a criminal offense to knowingly and willfully obstruct or oppose an officer of the United States in attempting to execute any legal or judicial writ process. United States vs. Kelly et al., 108 Fed. Rep. (U. S.) 538.

Navigable Waters—Collision.—Where a fisherman anchored his boat in an improper place, and did nothing to escape or prevent a collision when he saw a steamer approaching a quarter of a mile off, he was negligent, and could not recover for a collision with such steamer. Chesley vs. Nantasket Beach Steamboat Co., 61 N. E. Rep. (Mass.) 50.

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CLEVELAND, O.

LAKE TOURS.

For further particulars see
"Passenger Lines on the Lakes,"
page 18.

BETWEEN

DETROIT AND CLEVELAND.—Detroit & Cleveland Navigation Co., Detroit.

CLEVELAND AND CANADA.—Lake Erie Navigation Co., Walkerville, Ont.

CHICAGO, MILWAUKEE AND MICHIGAN PORTS.—Goodrich Transportation Co., Chicago.

CLEVELAND AND BUFFALO, N. Y.—Cleveland & Buffalo Transit Co., B. falso.

TORONTO, MONTREAL AND QUEBEC.—Richelieu & Ontario Navigation Co., Montreal.

CHICAGO ST. JOSEPH AND BENTON HARBOR.—Graham & Morton Line, Benton Harbor, Mich.

TOLEDO, WINDSOR AND SAULT STE. MARIE, ALSO "SOO" TO MICHIPOCOTEN.—Algoma Central Steamship Line, Sault Ste. Marie, Ont.

BUFFALO, CLEVELAND, DETROIT, "SOO" AND DULUTH.—The Erie & Western Transportation Co. (Anchor Line), Buffalo.

CHICAGO, CHARLEVOIX AND MACKINAW.—Manitou Steamship Co., Chicago.

TOLEDO & SARNIA, DETROIT & ST. CLAIR RIVER PORTS.—White Star Line, Detroit.

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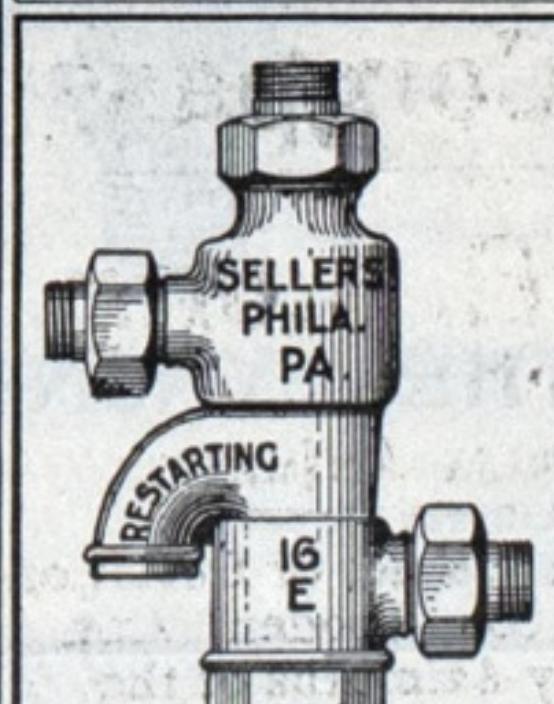
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THOS. DONNELLY, Sec'y.

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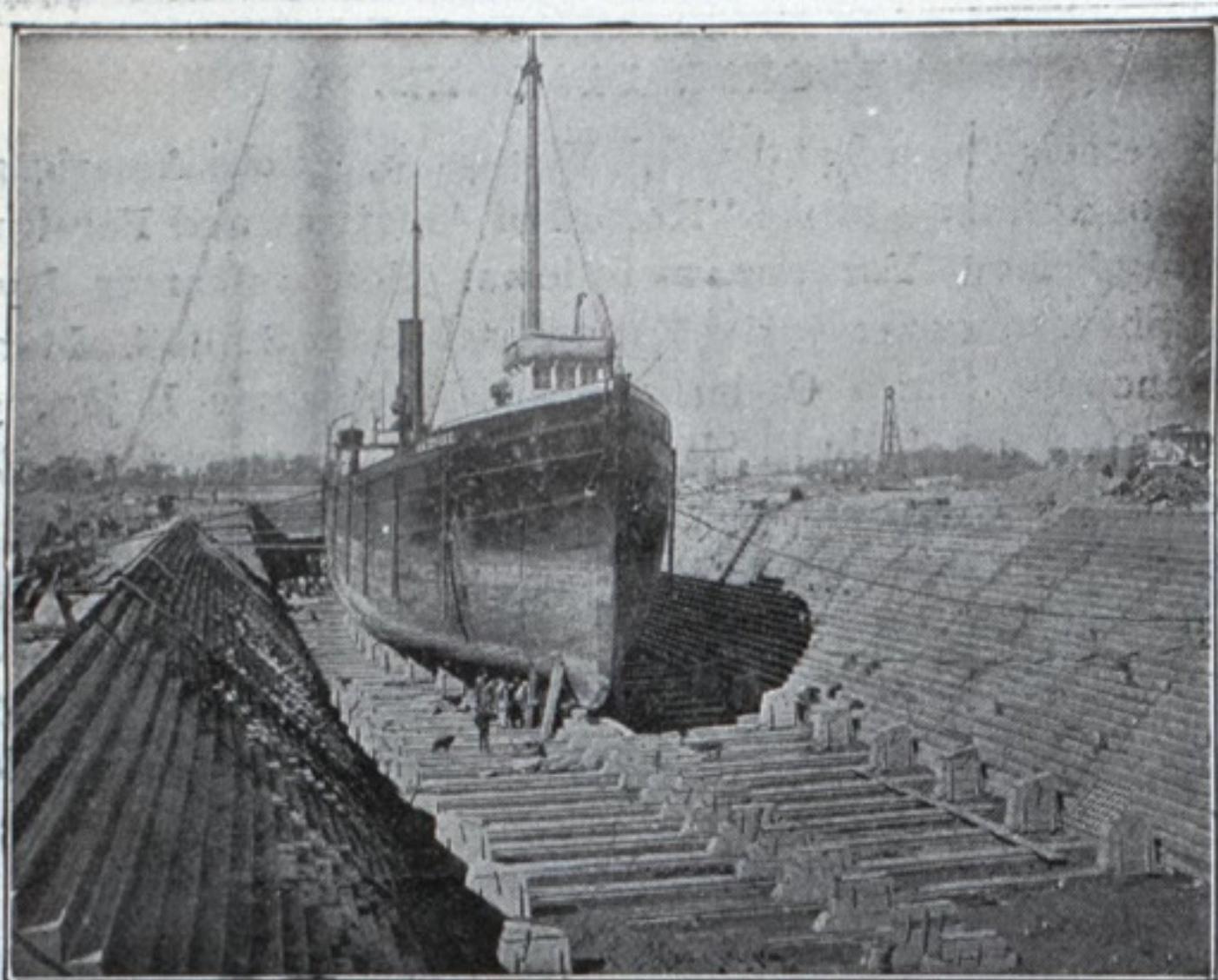
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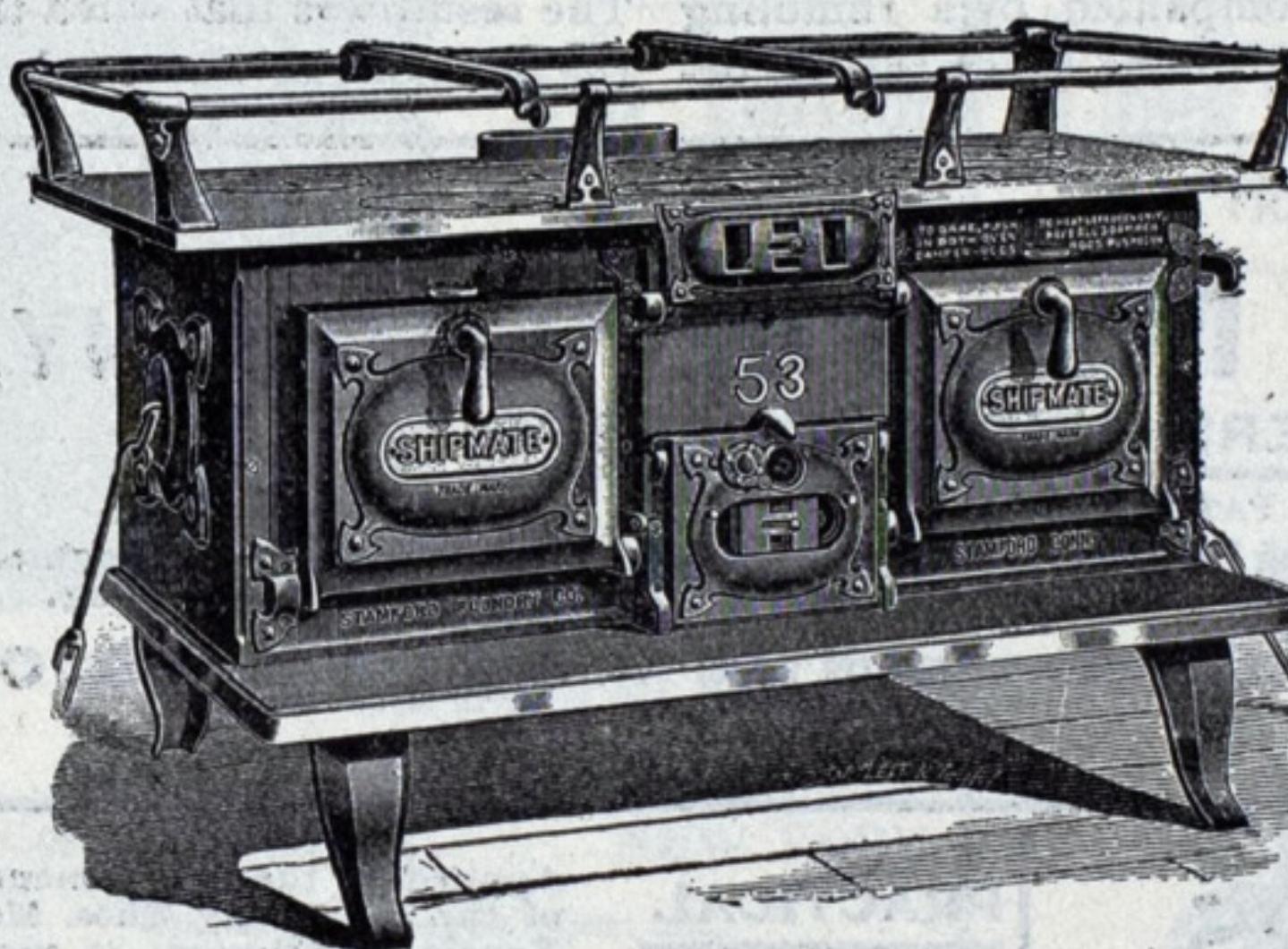
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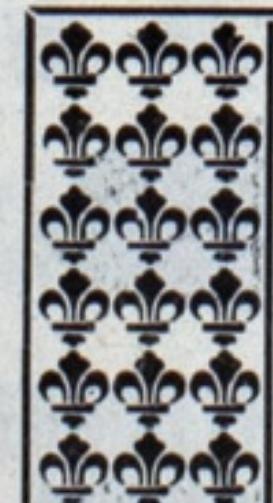
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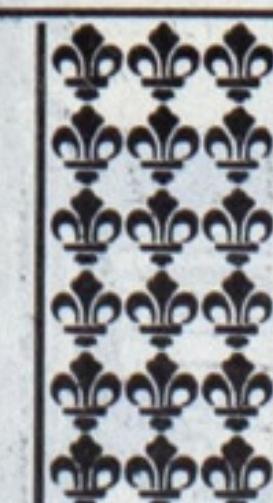
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